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May 1957

J. H. MCFARLAND CO.
Harrisburg, Pa.

Descriptive Catalog : Spring of 1910

Fruit Trees · Small Fruits
Evergreens and Ornamentals



LINN COUNTY NURSERY

SNYDER BROS., PROPRIETORS
CENTER POINT, IOWA

STATE OF IOWA
CERTIFICATE OF NURSERY INSPECTION
Office of State Entomologist, Ames, Iowa

This is to Certify, That in accordance with Chapter 53 of the Acts of the Twenty-seventh General Assembly, as amended by the Thirty-first General Assembly (Code Section 2575-a51), the nursery stock for sale by the **Linn County Nursery, Snyder Bros., Props., of Center Point, Iowa**, has been inspected by a duly authorized inspector and has been found apparently free from dangerously injurious insects and plant diseases.

This Certificate is invalid after July 1, 1910.

Certificate No. 161.

H. E. SUMMERS
State Entomologist

Dated July 22, 1909

VISIT OUR NURSERIES AND SELECT YOUR OWN VARIETIES

Tree-lovers always find a great satisfaction in seeing and selecting for themselves the trees they buy from a nursery. We take, therefore, great pleasure in inviting prospective customers, whenever possible, to visit our establishment and select their own trees.

Another advantage in doing this is the fact that we have here orchards of bearing trees of most of the sorts listed herein, so that it is easy to see just what may be expected of each kind, before ordering it.

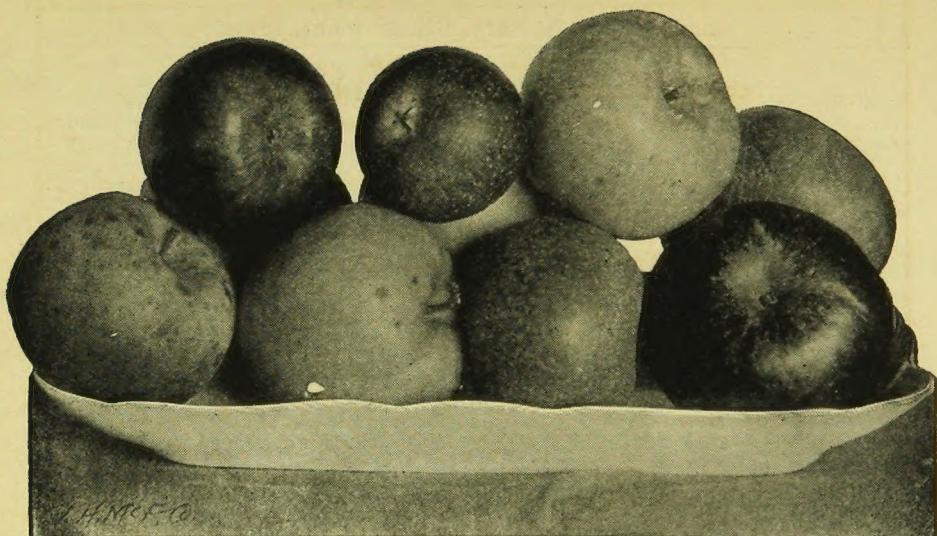
Our establishment is open to our friends, and every possible courtesy will be extended to make your visit here a pleasant one.

AS TO VARIETIES NOT LISTED IN THIS CATALOGUE

Our stock of trees, vines, shrubs and plants is by no means confined to the kinds listed here. If you do not see what you want, write us; we can furnish you practically everything you want—if it is obtainable anywhere—and the price will be right.

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Introductory

With eighteen years of practical and painstaking experience in growing nursery stock, we take pleasure in presenting our Book of Fruit and Ornamental Trees, Plants, Vines and Shrubs for 1910.

We invite your attention to the fact that we are this season listing a number of new varieties which have been carefully tried out and are now considered worthy.

Work in our experimental orchards has this season, as usual, produced some interesting results. By planting the leading fruits, such as plum, apple, cherry, peach, pear and the small fruits, and carefully noting the development each makes—its constitution, freedom from disease, time of blooming and fruiting, etc., we are able to tell exactly what it will do when planted in the orchards or gardens of our customers.

By giving the closest attention to the experimental orchard work, and by constantly working to develop and improve the quality of our stock, we have succeeded in bringing our trees to a point of unusual excellence. In our orchards we watch constantly for the trees that bear best, and from these we select wood for grafting and budding. In this way we always propagate from the best, this constant effort resulting in an unusually strong, thrifty and desirable line of trees, both fruit and ornamental.

With our improved facilities for growing and handling stock, and our continual aim to produce the best, we invite your attention to the attractive stock now offered. If you can come to see us, we invite you to do so; if not, be assured that no pains will be spared to handle your orders in the most satisfactory manner possible.

Our shipping season usually begins early in April and continues as long as stock can be safely handled.

A Certificate of Nursery Inspection, certifying that our nurseries have been examined and found to be free from all insect pests, is attached to every order that leaves our nurseries.

As to Ordering and Shipping

Always state whether shipment is to be made by freight, express or mail; if by freight or express, state the route preferred. When ordered by mail, always make your remittance large enough to cover postage.

Size and price of stock should be carefully specified. We use every effort to avoid errors, but in a busy season these must occasionally occur. We always appreciate being notified of such mistakes, however, and will gladly rectify the same when brought to our attention.

Please remit cash with order whenever possible. Satisfactory security is required from strangers who desire to open an account with us. Whenever possible, however, remittance should be forwarded with order, as shipments can then be made more promptly and much clerical work avoided in our office.

Introductory, continued

Money may be sent by post-office or express money order, or bank draft. Cash may be sent if enclosed in a strong envelope carefully sealed and registered. Stamps accepted for amounts less than one dollar.

We make no extra charge for packing and delivering to railroad station or express office. The greatest care is taken to pack so that stock will arrive in first-class condition.

Our excellent packing and shipping facilities. Our large packing-shed and cellar, located near the Rock Island Station at Center Point, give us splendid facilities for handling orders promptly and accurately. All stock will be delivered from this point and not from our farm as formerly.

As to prices. Our prices are not the lowest—the care which we devote to growing stock increases the cost greatly—but our trees are so vastly superior to those grown without particular care that the difference in first cost appears small by comparison. The point to be considered is that of final results, and in this our trees will outdistance the cheaper ones many times over.

Order early. Every spring we are compelled to refuse orders for certain lines of stock of which we are entirely sold out. *Order early*, and you will be sure of getting what you want, as well as the pick of the stock.

Guaranty. We exercise great care to keep our varieties true to name, and are ready at any time to replace any stock that may prove untrue, or refund the amount paid for the same; but it is mutually agreed that we are not to be held liable for any amount greater than the original price of the goods.

Condition. We accept all orders on condition that they shall be void should any injury befall our stock from hail, frost, storm, fire or other causes over which we have no control.

Trees by mail. For the benefit of customers living at a distance we are now supplying fruit trees of a size that can be sent by mail, thus saving high express charges. These are one-year trees of named varieties. Should you order a sort of which the supply is exhausted, we reserve the right to substitute a variety equally good and same season. All trees will be well wrapped and packed and sent postpaid at the following prices:

	Each	Doz.	100		Each	Doz.	100
APPLE. 2 feet.....	\$0 20	\$2 00	\$10 00	PLUM. 2 feet	\$0 20	\$2 00	\$10 00
PEACH. 2 feet.....	10	1 00		CHERRY. 2 feet.....	20	2 00	10 00
PEAR. 2 feet.....	20	2 00	10 00				

APPLES

This wholesome and popular fruit is more widely used year by year and is rapidly becoming one of the prominent features of our national products. Grown for market purposes, it is one of the most profitable of crops; while for home use, the apple orchard is nowadays almost or quite as important as the vegetable garden.

Apples are produced so easily that no one need do without them on account of trouble in raising them. With proper planting and ordinary care they will thrive in any soil that produces good corn. While other fruits are available for only a short period, apples may be had practically the year through—beginning with those sorts ripening in early summer, down to such varieties as, gathered in the late fall, keep perfectly through the winter and spring, until the newly ripened fruit is ready again.

Commercial orcharding is in its infancy in Iowa. There are thousands of acres in our State upon which no more profitable investment could be made than to plant a commercial orchard. The enormous quantity of apples shipped into our State and consumed at a good price, ought to be incentive enough to those possessing suitable soil and location to embark upon such enterprise.

Varieties. In planting commercial orchards it is judicious to plant but few varieties and they should be selected with reference to securing the best pollination. It has been found from experience that large blocks planted to a single variety have been more or less barren. For a family orchard a few of the best sorts, if judiciously selected, are quite sufficient to afford a succession of fruit throughout the year for home and market.

Size to plant. Persons selecting trees for transplanting will find it to their interest to choose small thrifty trees two to three years old, and from four to seven feet high, as such are more safely transplanted, and with more satisfactory results than older and larger trees.

Crooked trees. People who want only straight, symmetrical trees should order only those described as upright growers. Many varieties are crooked and gnarly in the nursery although later they make nice, well-proportioned trees. As a rule such varieties make the strongest and best orchard trees.

Apples, continued

How our apple trees are propagated. Our apple trees are all two and three years old, grafted by the best approved method, with the end in view to produce the tree best adapted to withstand the rigors of this climate. They are grafted upon roots produced from the seed of the hardiest varieties grown in northern Vermont; we know these to be much hardier than the ordinary commercial seedlings produced from the seed of the French crab. As we use a long scion and plant the grafts very deep in nursery, leaving only the top bud above the surface, there is scarcely a tree to be found at digging time that has not roots of its own above the point of union of scion and root. Such trees will become entirely independent of the seedling root upon which they were grafted.

PRICES ON APPLE TREES WILL BE AS FOLLOWS EXCEPT WHERE OTHERWISE NOTED

	Each	Doz.	100
First-class, 2 and 3 years, 5 to 7 feet	\$0 30	\$3 25	\$25 00
Medium, 2 and 3 years, 4 to 5 feet	25	2 75	20 00
First-class, 1 and 2 years, 3 to 4 feet	20	2 00	15 00
Six at dozen and 50 at 100 rates; the above rates apply only when the quantity taken is of one variety; six of a variety at dozen rates, and lesser quantities at piece rates; orders for 25 to 50 trees containing a long list of varieties cannot be filled at 50 or 100 rates.			

Select Summer Apples

Beautiful Arcade
Benoni
Duchess

Early Colton
Liveland
Red June

Red Astrachan
Sweet June
Tetofsky

Sop of Wine
Yellow Transparent

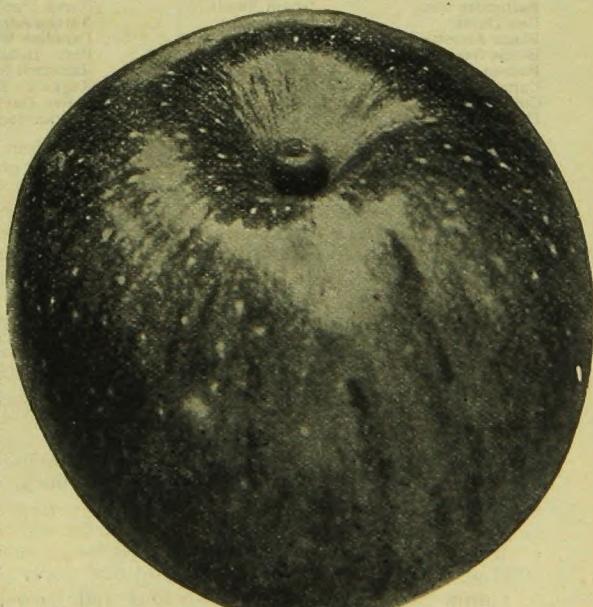
Beautiful Arcade. Tree an upright pretty grower, very hardy, clean and healthy. A young and profuse bearer. Fruit of good size, almost colored with red in splashes and streaks. Flesh white, tender, juicy, sweet, very pleasant. For dessert or cooking. Season last of August and September. One of the most desirable varieties for the North and Northwest.

Benoni. This old variety is still a great favorite for an early apple, and will bring a good price when other apples are a drug in the market. Tree vigorous, upright, spreading, hardy and productive; flesh yellow, juicy, tender. Best for dessert. August.

Duchess of Oldenburg. A Russian variety; fruit of large size, flavor slightly sub-acid; indispensable in the North. One of the most desirable sorts for market or domestic use; last of August and September. The trees are very hardy and vigorous, and bear abundantly.

Early Colton. This new variety is much superior to and ten days earlier than Early Harvest. Tree perfectly hardy, good grower, and abundant bearer. Flesh white, juicy and rich; best quality for cooking and eating.

Liveland. This we obtained at our experiment station at Ames under the name Rubets, but we find several other nurseries are propagating it under the name Liveland Raspberry. No matter which is correct, it is our very best and earliest summer apple; will keep in perfect condition longer than any early apple we have knowledge of. Tree a slow grower; early, regular and profuse bearer; very hardy; of Russian origin, rare and valuable.



DUCHESS OF OLDENBURG

Select Fall Apples

Anisim	Fall Orange	Longfield	Snow
Autumn Strawberry	Flora Belle	Nonesuch	Sweet Newton Pippin
Charlemoff	Hibernal	Patten's Greening	Utter's Red
Chenango Strawberry	Hutchens' Red	Plum Cider	Wealthy
Dominie	Irish Peach	Silken Leaf	Wolf River
Dyer			

Irish Peach. A good tree, hardy and fruitful, a splendid dessert apple, whitish yellow, beautifully blushed next the sun; juicy; pleasant, acid, aromatic. Season just after Duchess.

Longfield. Of Russian origin; perfectly hardy, a good grower and often begins bearing in the nursery rows at three years of age; is a regular and heavy bearer in orchard of most excellent fruit of fair size; flesh white, fine, tender and juicy, with a rich, sprightly sub-acid flavor. In the mountainous regions of the West, where the growing season is short, this is one of the very best winter apples. September and later.

Patten's Greening. A seedling of the Oldenburg and its equal as an orchard tree in hardness and bearing; large, uniform in size, pleasant acid, good cooking, and the best for drying, having yielded a greater number of pounds of dried fruit per bushel than any other variety. Season, September and October.

Wealthy. A native of Minnesota, where it has proved hardy, vigorous and productive. Beautiful and excellent fruit. Flesh white, fine, sometimes stained with red; tender, juicy, vinous, lively, sub-acid. September to December. We most heartily recommend this variety.

Fameuse or Snow. Tree vigorous and productive. Fruit small to medium, roundish, very handsome, deep crimson; flesh snow-white, tender, juicy, high-flavored and delicious. One of the finest dessert fruits. November and December.

Winter Apples

Akin's Red	English Golden Russet	Mann	Salome
Allen's Choice	Gano	McIntosh Red	Sheridan
American Blush	Greenville	Missouri Pippin	Sheriff
Arctic	Grimes' Golden	Monn	Stayman Winesap
Babbitt	Hinkley	Nelson Sweet	Talman Sweet
Bailey Sweet	Iowa Blush	Northern Spy	Walbridge
Baltimore Red	Isham Sweet	North Star	Wagener
Ben Davis	Isherwood	Northwestern Greening	White Pippin
Black Annette	Jamison	Paradise Winter Sweet	Windsor
Bottle Greening	Janet	Peru (Delicious)	Willow Twig
Boiken	Jonathan	Ramsdell Sweet	Winter Banana
Canada Baldwin	Jordan	Regan's Red (Black Ben Davis)	Winter Fameuse
Collins' Red (Champion)	Lansingburg	Roman Stem	Weismier's Dessert
Delaware Red Winter	Malinda		York Imperial

Akin's Red. Size and color much like Jonathan, but keep three months longer, quality even better than that excellent apple. Tree of strong upright growth, and has proven entirely hardy as far north as Minnesota.

American Blush. Medium to large, oblate, beautiful crimson on yellow skin; superlative quality, hardy and productive. Season, December to March.

Allen's Choice. Medium-sized Apple of excellent quality; flesh white, stained with red, crisp, juicy, aromatic, good, keeps all winter. Tree a young bearer, good grower and hardy.

Black Annette. A great favorite for home use. Tree of free, slender growth, very productive, will bear a peck of Apples sooner than any other variety, three-year-old trees often bear in nursery, fruit of medium size, striped with dark red on dull green, with numerous gray dots. Flesh greenish white, juicy, subacid, firm and one of the best keepers. Season, February to June and later. You will not be disappointed if you plant liberally of this variety.

Canada Baldwin. Tree hardy, thrifty, vigorous, upright grower; fruit handsome and of good quality; flesh white, fine, tender, juicy, refreshing, with a mild, subacid flavor. Keeps all winter.

Collins' Red (Champion). A very valuable market Apple of the Ben Davis type. Fruit very firm and will keep two months longer than the aforesaid variety. Tree a great drought-resister, a young, constant and heavy bearer.

Gano. Tree very healthy, vigorous and hardy, having stood 32° below zero unharmed. A rapid grower, large and spready, early annual and prolific bearer. Fruit large, red, without stripes. December to May.

Winter Apples, continued

Greenville. Downing's Winter Maiden Blush, new, from seed of the popular Fall Maiden Blush, which it closely resembles in size, color, flavor and productiveness, but it is a better grower and keeps all winter. We have been growing it for several years and are well pleased with its behavior.

Grimes' Golden. Tree vigorous, reasonably hardy, upright, spreading, very productive; flesh yellow, rich, sprightly subacid, highly prized for its uniform regular annual crop. December and later.

Hinkley. This is a long keeping winter Apple, as hardy as Duchess; color mostly red splashed with yellow; above the average in size, and of splendid quality; this variety is being distributed under various names as follows: Lone Tree Seedling, Ideal and Legal Tender; all one and the same thing. It is a worthy variety and should be planted extensively.

Iowa Blush. One of the most valuable sorts for home use. Tree hardy and vigorous; a splendid dessert or cooking fruit. Fruit size of Janet and very handsome. Season, November to April.

Isherwood. An Iowa Ironclad, upright, vigorous grower; very productive and valuable fruit large and handsome; flesh rich and excellent. Season, late winter.

Malinda. This is one of the hardest of American varieties, a great favorite at the North. Tree of medium growth, spreading top. Fruit medium to large, subacid flavor. Season, January to May.

Nelson Sweet. A large, sweet Apple that keeps all winter; color dark green. Tree a strong, free grower and hardy. Just the thing for those who like a real sweet Apple.

Northern Spy. Large, striped, mild, subacid and tender, of a rich delicious flavor. Season, late winter. An old variety that is becoming more and more popular.

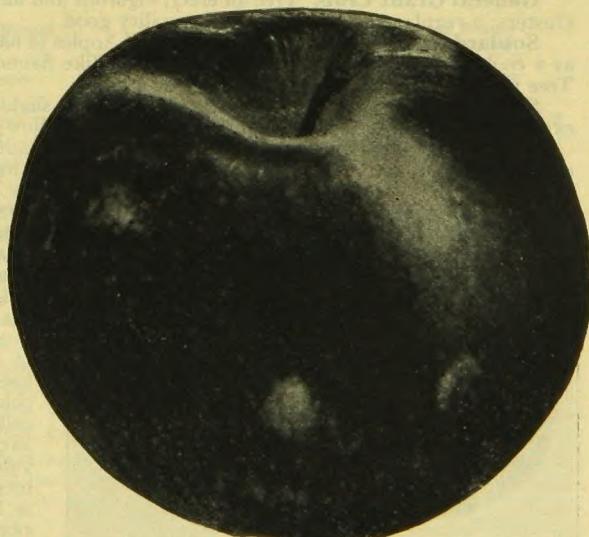
North Star. This beautiful apple originated in the highlands of Aroostook county, Maine. Tree a strong, vigorous grower, entirely hardy and very productive. Fruit large and very best quality; color red on yellow, flesh yellow, tender, juicy, excellent flavor, core small. Season, December to April.

Northwest Greening. A good commercial variety, originated in Waupaca county, Wisconsin. A large, handsome green Apple, changing to yellow when fully ripe. One of the best keepers yet produced. Quality very good. Tree a strong grower and very hardy; grows in favor each succeeding year. We strongly recommend this variety.

Paradise Winter Sweet. This is an excellent variety for home use and is a great favorite with those who love sweet Apples. Tree reasonably hardy, upright, vigorous but not a very heavy bearer; smooth, yellow, fine appearing fruit.

Regan's Red (Black Ben Davis). This is no doubt the most valuable commercial variety of the Ben Davis type. It is larger fruit and of a much deeper, darker color than the old variety, and some better in quality; for hardiness the tree is about the same.

Roman Stem. A beautiful Apple, medium to large; rich, pleasant, musky flavor; dessert. Tree hardy, a slender grower, regular bearer and reasonably productive. An old variety which continues to grow in favor; will keep all winter; very desirable for home use.



GANO APPLE

Winter Apples, continued

Salome. Flesh whitish, yellow, tender, mild, slightly aromatic, good; its hardiness, long keeping, good quality, uniform size, retention of flavor quite late, even into summer, will no doubt make it valuable for the West and Northwest. This variety is gradually but surely making its own way, and we regard it as one of the most valuable.

Sheriff. Tree vigorous and very hardy; one of the most satisfactory varieties yet planted in this section; fruit medium to large, usually highly colored; splendid quality; bears early and regular crops. Season, December to February.

Stayman's Winesap. Much superior to its parent—the old Winesap—in size, flavor, color and keeping qualities. Fruit large, bright red, of best quality and a good keeper. Tree hardy, vigorous and very productive and a young bearer.

Windsor. Originated in Wisconsin, and grown in Iowa for eighteen years. Tree a free grower, smooth, well-formed, free of blight and entirely hardy. Season, December to March, as grown here.

Winter Snow. Here is an Apple that for quality, flavor and texture of flesh is exactly like the common Fameuse. Fruit about the same size, but not near so highly colored, and will keep until spring. This is a great acquisition to lovers of the Snow Apple. We have been grafting of this variety (sport, it might properly be called) from an old tree propagated by Prof. Budd many years ago, which is still thrifty and fruitful.

Select Crab Apples

A good assortment of these hardy and beautiful trees should be among the things planted earliest. They are perfectly hardy and may be relied upon to furnish abundance of fruit suitable for a great variety of purposes. In our list of crabs are some of the finest. They are the special delight of the small boy. Don't allow him to go unsupplied. Plant them for the children.

Price of Crab Apple, except as otherwise noted, same as for Apple trees of same size.

List of varieties, with descriptions of a few of our leading varieties following. These can be furnished in all sizes, up to 5 to 7 feet, except as otherwise noted.

Alaska	Golden Russet	Red Siberian	White Arctic
Augustine	Golden Beauty	Soulard	Wild Red Crab .
Briar Sweet	Hyslop	Sweet Russet	Washington
Excelsior	Mercer	Transcendent	Virginia
Gideon's Best	Quaker	Whitney No. 20	Yellow Siberian
General Grant	Northfield Beauty		

Excelsior Crab. A beautiful new hardy variety, originated with Peter M. Gideon, of Excelsior, Minn. It is a seedling of the famous Wealthy apple, which it resembles in quality, and is a strong, handsome-growing tree. Ripens in early fall, a little later than the Duchess of Oldenburg; the handsomest, hardest and best of our new crabs.

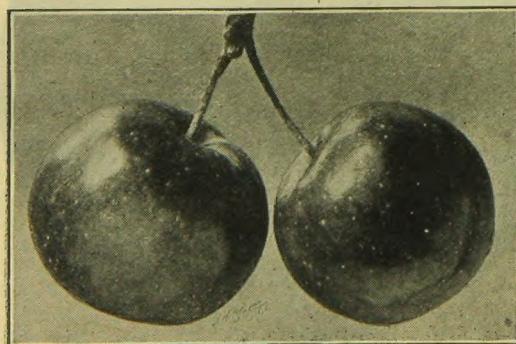
General Grant Crab. Tree an erect, vigorous and handsome grower; fruit in dense clusters; a regular and profuse bearer; quality good.

Soulard Crab. The largest of this class of Apples (a native wild crab); very valuable as a cooking Apple; when cooked, a fine quince-like flavor; keeps very well until July. Tree very productive and hardy as any wild crab.

Sweet Russet Crab. Fruit large, pale yellow, slightly covered with russet; flesh exceedingly rich and sweet; a delightful eating Apple. Slow grower, hardy and productive.

Whitney's Seedling No. 20. A valuable and beautiful crab. Tree very hardy; enormously productive and seldom fails to bear. Fine for cider, jellies, etc.

Wild Red Crab. This novel Crab was found growing wild in Johnson county, this state. It is a cross of the wild crab upon one of our winter apples. Color, red. Fruit will average in size with Whitney No. 20. It is a good cooker and makes jelly of superb flavor; it will keep the year round in perfect condition, with only ordinary cellar storage. Tree is as hardy as our native wild crab, and is a valuable tree for the home. The increasing demand for this tree is large; many buy it for the sweet fragrance of its bloom. 5 to 7 feet, 35 cts. each.



WILD RED CRAB APPLES

SELECT PEARS

Although formerly considered very unfavorable for Pear growing, the Iowa soil and climate are now proving themselves well adapted to the production of numerous varieties, especially Kieffer and Seckel. No one should plant Pears extensively in this state without first assuring himself what varieties will succeed in his soil; but, with proper investigation, we are convinced that every section of Iowa will produce one or more varieties of Pears with excellent results.

As a commercial fruit, the Pear stands close to the apple and the peach; and we are convinced that the time is near at hand when Iowa will grow the Pears needed for its own markets.

The varieties listed below are considered especially free from blight which is the great enemy of the Pear. This disease, when it appears at all, shows itself in the blackening and drooping of the leaves, and is controlled by cutting off the infected branches several inches beyond the point to which the disease extends, and burning them. Dipping the pruning tools frequently during the process in a solution of bichloride of mercury will prevent a spreading of the disease.

By selecting our trees and exercising proper care, however, little trouble from blight need be expected in growing Pears.

PRICE-LIST OF PEAR TREES

	Each	10	50	100
First-class, 5 to 7 feet, 2 to 3 years	\$0 50	\$4 50	\$20 00	\$37 50
Medium, 4 to 5 feet, 2 to 3 years	40	3 50	15 00	27 50

Varieties marked with a * can be furnished in dwarfs; these are budded upon quince roots, first-class, caliper $\frac{3}{4}$ inch and up. Same price as first-class standard. The following list can be furnished in sizes as priced above. We describe only a few of the leading varieties.

*Bartlett	Golden Russet	Lincoln	Vermont Beauty
*Flemish Beauty	*Kieffer	Howell	Worden-Seckel
*Seckel	Krull	Shropshire	Wilder
Sheldon	Mt. Vernon	Rossney	Mongolian Snow
Garber			

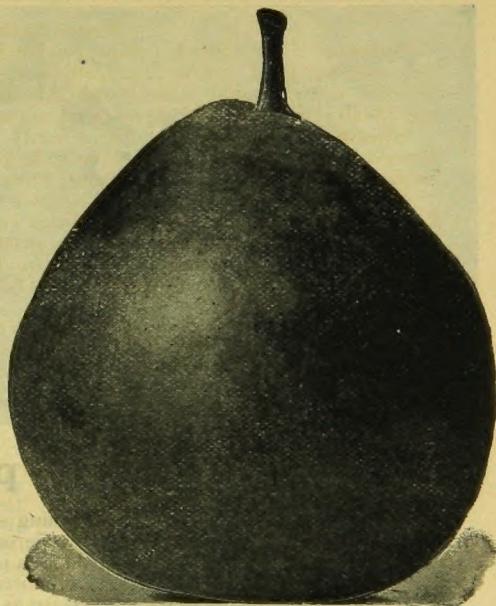
Golden Russet Pear. This unique variety promises to be of great value in the south half of Iowa; its peculiar thick, leathery foliage renders it free from blight. It is proving a young and heavy bearer of fruit; above medium size and of good quality.

Garber. Rapid, vigorous grower; young bearer, hardy, productive. Fruit very large; excellent for canning. Season, September and October.

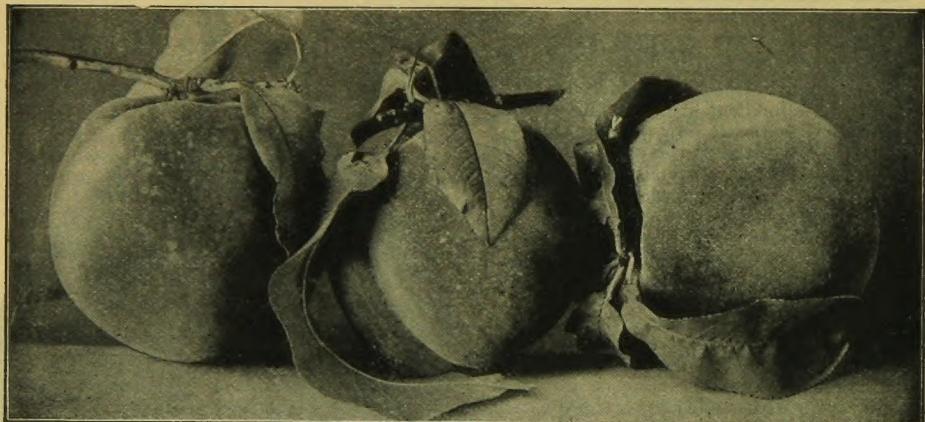
***Kieffer's Hybrid Pear.** A cross between the Bartlett and Chinese Sand Pear. Now regarded as a standard fruit; with us it has never shown any trace of blight. Fruit measures 10 to 12 inches around; flesh white and firm, juicy and rich, with pleasant flavor and good quality. Will keep through November. The fruit is at its best when plucked early—just as soon as the stem separates easily from the twig—and laid away in a cool, dark place, to ripen gradually.

Seckel. Tree is the healthiest and hardiest of all Pear trees, bearing regular and abundant crops in clusters at the end of branches. Flesh whitish, buttery, very juicy and melting, with a peculiar rich, spicy flavor and aroma; pronounced the richest and most exquisitely flavored variety known. Season here, September.

Worden Seckel. This beautiful Pear was originated by Mr. Sylvester Worden of Minetto, N. Y. A seedling of the Seckel and fully equal to its famous parent, which it much resembles in flavor and is equally luscious, more juicy, and with an aroma equally rich and inviting, while in size, color, form and appearance it is decidedly superior. Will endure any climate and is an enormous bearer. Ripens just after Seckel.



GARBER PEAR



HARDY PEACHES

Hardy Peaches are one of our leading specialties. The list of varieties we offer are the result of years of experimenting in endeavoring to find varieties hardy enough to endure the trying Iowa winters. Success is found largely in the varieties originating here in Iowa. We claim the list here submitted cannot be excelled for hardiness.

We do not claim that Peach trees are as hardy as plum and apple, but they have succeeded in living through our most severe winters. While they may be more or less injured by an occasional trying winter, yet by proper pruning and cutting back they will outgrow their injuries and continue to bear profitable crops of fruit.

Our Peach trees are budded upon the hardest stock in existence, namely seedlings produced from native grown seed of the Bailey Peach. We plant them about a foot deeper than they stood in the nursery, so that if the tree is ever killed back to the ground it will throw up a sprout from above the bud union and thus renew the tree.

PRICES OF PEACH, EXCEPT WOLF

	Each	10	100
5 to 6 feet	\$0 30	\$2 75	\$25 00
4 to 5 feet	25	2 00	18 00
3 to 4 feet	20	1 50	14 00

Arctic. A large yellow Peach with red cheek. Flesh yellow, melting; excellent in quality. Ripens last of September. One of the most hardy in tree and fruit bud.

Bailey. The Friday seedling or Bailey Peach has a record of seventy years in Iowa, and an average of three crops out of every five years during this time. In Cedar county it has borne heavy crops for many years in succession. Fruit medium size, perfect freestone, small pit; white flesh, sweet and juicy. Season, first to middle of September. This variety reproduces true from seed. Get a dozen of these seedlings; they will produce fruit in two to three years. Nice stocky 2-foot trees, \$1 per doz. See list below for budded trees.

Banner. Originated in Canada, one of the hardest in bud and wood. Fruit large, yellow with crimson cheek; excellent quality. Last of September.

Bednar. A large oblong, yellow freestone of splendid quality. Tree hardy and very productive for four seasons past. One of the most valuable acquisitions to our Peach list.

Bokara No. 3. From central Asia. Fruit freestone, yellow with red cheek; flesh yellow; good. September.

Champion. A large handsome early variety, creamy white with red cheek, sweet, rich and juicy. August.

Elberta. A very large yellow freestone, rich sweet and juicy, vigorous grower and moderately hardy. September.

Leigh. This is of Linn county origin and has a great record for productiveness. The original tree produced eight measured bushels of fine fruit at one picking. Some one-year-old trees we sold five years ago produced three to four bushels of fruit in 1908. Fruit large, fine specimens measure $10\frac{1}{2}$ to $11\frac{1}{2}$ inches in circumference and weigh $10\frac{1}{2}$ ounces, handsomely blushed with white flesh, very sweet and juicy meat. Ripens last of August.

Hardy Peaches, continued

Lone Tree. The original trees of this variety have stood twenty years in Johnson county, Iowa, without protection, having withstood 32° below zero unharmed; has produced crops of fruit on an average of every other year for this time; fruit is medium size, large specimens having measured 8½ and 9 inches in circumference; color, yellow inside and out, without any blush; pit very small; ripens about September 10. We regard this variety as most promising for success in Linn county.

Pierpoint. A Linn county seedling of great promise and apparently hardier than the average run of Peaches. A large yellow freestone, with red cheek and white flesh, juicy and of excellent quality. Pit very small. Ripe fore part of September.

Russell No. 1. Fruit medium-sized, roundish or oblong, flesh greenish white; tree hardy and productive. Season, September 15.

Wolf. A seedling of the Lone Tree Peach, its equal in size and quality with the addition of a bright red cheek, and ten days earlier in ripening. Tree fully as hardy as its parent and very productive. One of the most promising in our list. 5 to 6 feet, 50 cts.; 4 to 5 feet, 40 cts.; 3 to 4 feet, 25 cts.

PLUMS

No other fruit has as great a variety of uses or is capable of satisfying as great a number of tastes as the Plum. The Plum is in its native element in Iowa soil and climate, this section having been favored with many choice varieties in its primitive state.

Varieties. We are making this fruit a specialty and our experimental orchard is our delight. Up to the present we have planted in it about 250 varieties, many of which have been discarded. It is our aim to test all varieties which come well recommended and hold fast only those which are good, and our customers shall have the benefit of our experience. By a careful selection of varieties one may enjoy fresh Plums from early in July till October.

Cultivation. Do not deceive yourself by thinking you can plant a lot of Plum trees in an old, dry, soddy patch and make them board themselves, work for nothing and yield bountiful crops of luscious fruit; if you do you will most certainly be disappointed. Give them your best land and as good and frequent cultivation as you would give your corn or garden, and you will succeed. Clean cultivation is one of the best remedies against the Plum curculio.

Crooked Trees. What was said about crooked trees under apples is specially applicable to many varieties of Plums. It is practically impossible to grow what many people would call a "decent" tree of some varieties, yet these same trees afterward develop into well-shaped orchard trees. Some of them will grow crooked in spite of us. "It is the nature of the critters."

PRICE OF PLUM TREES

	Each	10	50	100
5 to 7 feet, 2 to 3 years	\$0 50	\$4 50	\$20 00	\$37 50
4 to 5 feet, 2 to 3 years	40	3 50	15 00	27 50
3 to 4 feet, 1 and 2 years	30	3 00	10 00	18 00
2 to 3 feet, 1-year switch	15	1 50	7 00	12 50

Five at 10, 25 at 50, and 50 at 100 rates; the above rates to apply only when the quantity taken is of one variety; six or variety at dozen rates, and lesser quantities at piece rates; orders for 25 or 50 trees containing a long list of varieties cannot be filled at 50 and 100 rates.

Grouping. In the following descriptions we will group the different families by themselves beginning with those varieties belonging to the American group, which embraces all varieties native to or descended from varieties originally found in the northwestern portion of the United States—Iowa and Minnesota, in particular. The varieties belonging to this group are the hardest in tree and bud of anything in the Plum line.



WOLF PEACH

Plums, American or Native Group

The following list can be furnished in sizes as priced above. Will describe only a few of the leading varieties.

Beatty	Forest Garden	Klondyke	Terry
Champion	Hawkeye	Snyder	Wolf
De Soto	Hunt	Stoddard	Wyant
Cheney	Iowa Beauty		

Beatty. This Plum originated in Benton county, Iowa, and bears the name of its originator. A beautiful, upright tree, with the best of foliage; hardy and thrifty. Fruit large to very large, beautifully colored, transparent yellow, blushed with red. Quality as good as De Soto for any purposes. This Plum combines more good qualities than any we have yet fruited. Season, last of August.

De Soto. Here is our old standby. To this we can compare everything else as a standard of quality. They are as good as peaches when canned and one does not tire of them so soon. Its only fault is overbearing—should be thinned for best results. Cultivate or mulch this variety and pick off fully one-half the fruit soon after it has set and you will be richly rewarded. Medium to large; vary in color from yellow to purplish red. Season, middle to last of August.

Hawkeye. Large to very large; roundish, oblong; thick skin; a little coarse in flesh, rather firm; grayish purple. Tree of spreading habit, inclined to droop; hardy and productive. Season, last of August. Many call it the best plum in cultivation.

Snyder. Originated by J. H. Fairchilds, Linn county, Iowa. This has proved to be the most productive large plum of good quality we have yet tested; will carry the heaviest crop of uniformly large fruit of any variety we have seen. Tree a strong grower, with the best foliage.

Wyant. The best dessert plum among the natives. Peeled and served with cream and sugar it is fine, or for eating out of hand fresh from the tree; many think it is one of the best for canning also; however, it develops too much acid in cooking to suit everyone for that purpose. The thick skin peels readily, leaving a toothsome morsel of delightful flavor. Freestone; purplish red; large, round, oblong; very prolific and extremely hardy.

Miner Group

The varieties comprising this group are all comparatively late in ripening, about as hardy as those of the American group, and uniformly productive of large, beautiful colored fruit of best quality. They are nearly all self-sterile, but the kinds effectually pollinate each other, if thoroughly mixed when planted in the orchard. As there is little difference in the time of blossoming, plant a tree of one variety and then another, and so on, mixing the different varieties as much as possible; then you will be assured of perfect pollination.

Miner. This is an old standard variety, almost too well known to need description. Many regard it as a shy bearer, which is due to lack of proper pollination. When planted in an orchard among many other varieties it bears regular and very heavy; large, round, dull red; clingstone; late and profitable.

Surprise. A large red Plum, excellent for dessert or market; very prolific, bearing immense crops of large Plums on very small trees; flesh rich, sugary, delicious flavor; tree vigorous and hardy; desirable for the Northwest.

Wild Goose Group

This we regard as the commercial group of the native Plums. It is safe to say that there is three times as much fruit of this group grown and sold as of all other natives combined. At three cents per quart orchards within fifty miles of a market will yield a handsome profit. The varieties listed in this group can be relied upon to produce easily 15,000 quarts per acre, not every year, but say three out of five. The varieties of this group are not as a rule quite so hardy as varieties of other groups, and for that reason would not advise planting them beyond, if quite to, the north line of this state.

Whitaker. Large, round, oblong; red; clingstone; the earliest good Plum in our list; very productive; only a few days later than Milton, which variety is the first to make its appearance on the market. This we have discarded because of its poor quality—and we can afford to wait a few days longer for fruit which will be good when we get it. So for the early Plum we advise to plant the Whitaker; it is one of the most profitable orchard varieties, and we consider it the best pollinator in our list for Charles Downing.

Pottawattamie. Fruit of medium size and good quality; tree hardy, very productive and a regular bearer.

Plums, Triflora Group (Japan)

The varieties of this numerous family which we consider worthy to be retained in the orchard are very limited. The reason we retain any of them is on account of their superior quality of fruit and great productiveness. In point of hardiness and other characteristics of tree none of them can be very highly recommended. We will continue to propagate a few of the best varieties, which we list below.

Burbank. Large, oblong, slightly conical, marbled and overspread with red; clingstone; season, middle to last of August; the most profitable of this group; flesh deep yellow, very sweet, with a peculiar and agreeable flavor.

Abundance, or Sweet Botan. Large to very large; light greenish yellow with red blush and a very marked suture. Vigorous upright-growing tree, hardy here, but would not recommend it to plant much farther North. One of the sweetest and best fruits of our entire list. Very much subject to injury by insects and birds and must be carefully sprayed and guarded to save the fruit.

Maynard. Fruit large, nearly round, dull red. Flesh firm, juicy, rich and sweet. Tree unsurpassed in vigor.

Red June. The best Plum of its season; in fact, it has no competitor, being the first to ripen; gets ripe with the raspberries in forepart of July. Flesh light yellow, partially clinging to the seed; firm and moderately juicy, of good quality and large size; the fruit is of a beautiful red color; tree hardy and productive.



BURBANK PLUMS

Domestica Group

This family embraces the European varieties of Plums and prunes. They must be sprayed regularly to prevent the curculio and brown rot from destroying the crop. If it were not for this pest this class of Plums, including prunes, could be as easily and profitably produced as any of the common natives, and of late it is in fact a serious question whether it will be a profitable undertaking to try to grow the common natives without also preparing to spray regularly. Spraying is so beneficial to trees and fruit that no one should hesitate at the time and trouble it involves. Once we succeed in bringing a crop of these garden Plums, as they are sometimes called, to maturity, there is greater satisfaction to be derived from the various uses to which they can be applied than from any other class of Plums. Many of them are most delicious dessert fruits, some are unexcelled for culinary use and several make excellent prunes when properly cured. We submit a short list of the best of this class for this section.

Richland. Tree upright, vigorous and hardy; fruit prune-shaped, with very marked suture, medium to large; covered with a heavy bloom underneath, which is coppery color, tinged with blue; flesh greenish yellow; juicy, sugary, and freestone; very heavy bearer. A very fine fruit for dessert or culinary use, and makes an excellent prune when cured.

Communia. Introduced by the Communia Colony of Northeast Iowa. A fine grower, with large, perfect foliage, and is an early and continuous bearer of quite large blue fruit, with much bloom; a fine fruit for culinary use or dessert; should be in every garden.

Plums, Domestica Group, continued

Spanish King. Tree very vigorous and hardy, a young and heavy bearer. Flesh deep yellow, juicy, pleasant and sweet. Ripens middle of August. This Plum makes an excellent prune when properly cured. Of all the plums in our orchard none are more productive or profitable, and few surpass it in quality; canned for winter use none suit our taste any better.

Tatge. A seedling originated at Belle Plaine, Iowa, some twenty-five years ago; bears the name of its originator; has stood all the test winters unharmed. It is a fine grower, an early and profuse bearer; fruit large, dark blue, of splendid quality; makes a fine prune, properly cured.

Blue Moldovka. One of the most delightfully flavored Plums that can be grown. Fruit large, of luscious melting quality and excellent flavor. Freestone, large, blue, with light suture. Imported from Russia; perfectly hardy; very desirable.

German Prune. This is one of the best of the prune family, of fine quality for dessert use, and especially esteemed for drying and preserving; abundant bearer; flesh firm, sweet and pleasant; freestone. Not so hardy as other varieties of this group, and should not be planted much north of here.

Shropshire Damson.

Fruit of good size, dark purple, unexcelled for preserving and borne in great abundance. Oct.

Reine Claude.

This is a very short-jointed tree, of spreading, rather dwarfish habit. It is an abundant and regular bearer; pale green, melting and juicy; freestone. Above medium size; greenish yellow, ripens middle of August.

Shipper's Pride. A large Plum, very hardy and productive and possessing remarkable qualities for market. The flavor is fine and altogether it is one of the greatest acquisitions to the list of Plums in many years. Dark blue; and ripens late in August.

Deaton. Large pale green fruit, with a heavy white bloom. Unsurpassed in quality for either dessert or culinary use; freestone; ripens last of August. Tree of Domestica type and will thrive where other European Plums do well.

French Damson. Above medium size, with very marked suture; dark blue. Ripens early in September. A splendid, luscious fruit for either dessert or culinary use. Tree perfectly hardy and prolific.

Ungarnished Prune. A low, spreading tree that is proving to be very valuable in our orchard. Fruit of large size, with a deep suture, dark blue, with much bloom; is prune-shaped; a perfect freestone, and of very high quality when fully ripe, but if tested when it first colors is very sour. When soft and mellow, they have the quality and flavor of the Italian prunells. Not an early bearer, but very productive.

Hybrid Group

Along this line, our list is rapidly increasing, and promises to be very interesting in the future, and we hope profitable. Out of the many hybrids making their appearance at the present time, we have to believe something valuable to the fruit-grower will evolve.

Compass. A hybrid of Miner Plum and Sand Cherry; originated in Minnesota, and is in great demand for planting in the Northwest. Unsurpassed in hardiness, a wonderfully thrifty, healthy, clean-growing tree; bears profusely when two years old; fruit small, purplish red; quality very fine for culinary use.

America. (Robinson and Botan.) There has been nothing produced in our orchard that has attracted more attention than this variety; very large and prolific; not surpassed in beauty by any Plum; flesh moderately firm and delicious; tree vigorous and hardy. 5 to 6 and 4 to 5 feet.



FRENCH DAMSON PLUMS

SELECT CHERRIES

Of recent years this fruit has been in greater demand than any other class of fruit, and probably will so continue for years to come. Those engaged in fruit growing on favorable soils will do well to plant liberally of this fruit. Cherries are an excellent yard fruit, and return good profits when sold at market. It is not unusual for an acre of trees in full bearing to yield from \$50 to \$300 worth of fruit in a single season.

Cherry trees are, as a rule, short lived. They actually bear themselves to death. Cherries will thrive on any good, well-drained upland. We have quite a number of new varieties on trial and in due time doubtless will have something good to offer. The following described varieties we have found to be the best out of a long list.

In wet seasons the last three varieties of our list are subject to leaf diseases; therefore should only be planted on high, well drained land and in excessively moist seasons be frequently sprayed with Bordeaux Mixture (see spraying directions on Calendar in back of catalogue) to prevent the development of any leaf disease.

Where these varieties can be successfully grown they produce the most salable and best fruit of any in the list.

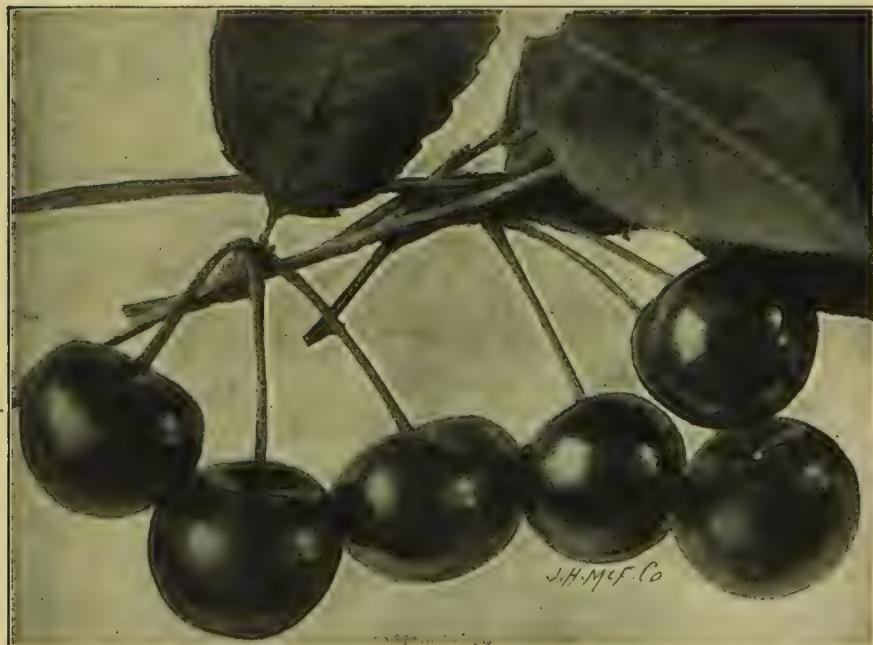
PRICE-LIST OF CHERRY TREES, EXCEPT AS NOTED OTHERWISE

	Each	10	50	100
First-class, 2 years, 5 to 6 feet	\$0 50	\$4 50	\$20 00	\$37 50
First-class, 2 years, 4 to 5 feet	40	3 50	15 00	27 50
First-class, 1 year, 3 to 4 feet	30	3 00	10 00	18 00
First-class, 1 year, 2 to 3 feet	20	2 00	8 00	15 00

Five at 10, 25 at 50, and 50 at 100 rates; the above rates to apply only when the quantity taken is of one variety; orders for 25 or 50 trees, containing a long list of varieties cannot be filled at 50 and 100 rates.

Early Richmond. Ripens latter part of June. Color red; quality acid, valuable for cooking early in season. Tree hardy and a regular bearer.

Montmorency. Tree of this variety is very hardy and immensely productive; fruit very large, flesh firm and meaty. As a canning Cherry it is much superior to the Richmond. The most profitable Cherry to plant for market; has borne eight full crops in succession here in our orchard. Color bright clear red; two weeks later than Richmond.



EARLY RICHMOND



WRAGG CHERRIES

Select Cherries, continued

Double Glass. We received this variety from Prof. Budd, of Ames. One past season we sent him a package of the fruit from our trees and here is his reply. "The variety sent is Double Glass. It is as large as the Yellow Spanish of California and the South, heart-shaped, bright yellow in color and sweet. It was found by the writer in 1882 in North Silesia and imported under the name of 'Doppelte glebe glasskirsche.' The name comes from the large yellow fruits grown in pairs and often in triplets. It is fully as hardy at Ames as the Early Richmond, and indeed, harder, as we have trees in Ames 15 years old and there is not an Early Richmond of that age left." One-year buds, 6 to 7 feet, 40 cts.; 5 to 6 feet, 35 cts.; 4 to 5 feet, 30 cts.

Dyehouse. Medium size; rich, juicy and of good quality when fully ripe; very productive, a little earlier than Richmond. Has become a standard variety.

Baldwin. A very promising variety of the Morello type; a vigorous, healthy tree; with thick rugose leaves, very resistant to leaf diseases. Fruit round, dark red, medium size, small stone; quality good.

Wragg. This is a sturdy grower and an immense bearer of large, handsome, dark-colored fruit, which ripens early in July. A fine, healthy, hardy tree.

Ostheim. A hardy Cherry, imported from Russia. It has been tested extensively in the Mississippi valley and has proven to be perfectly hardy. Fruit large, roundish, oblate. Flesh reddish, tender, juicy, mild, subacid, almost sweet; very good. The king of all good Cherries of the Morello class.

English Morello. Medium to large; blackish red; rich, acid, juicy and good; one of the best in our list; very productive; tree a moderate grower; season, July.

Compass Cherry. See Hybrid Plums.

SELECT GRAPES

The grape is one of the most highly prized, as well as one of the most wholesome fruits, and it is adapted in some of its varieties to nearly all portions of the country, and with a little care and attention can be raised on every farm and in every garden.

It can be grown by any one who has a garden, a yard or a wall; can be confined to a stake, tied to a trellis, trained over an arbor, or allowed to cover a tree or building. Generally the vines do best trained on a trellis, and where the winters are severe they should be pruned in the fall, laid down and covered with soil.

The grape should be planted on well-drained land. They will not thrive over a cold, wet and stiff subsoil. Prepare the land in which to set Grapes by plowing and subsoiling just as deep as the tools can be run. Then dig big holes in which the roots can spread

Select Grapes, continued

out without crossing or doubling them up. Any good, ordinary farm land will produce fine Grapes in Iowa. Eight feet apart each way is a very good distance to set them; 6 by 8 will do but more is better. Cut back to two buds the first year and rub off all others as they appear. The first autumn, cut back to four or six buds and cover the vine with earth. Let two canes grow the second year, and in the autumn cut one of them back to three buds and the other to the length of about four feet to bear. This severe pruning gives them a strong root before allowing them to bear. Give them thorough, clean surface cultivation and you will be richly rewarded. The excellent start that our young Grape Vines receive explains much of their success.

Concord. Black. This has been for many years the Grape for general planting. Bunch and berry large. Medium early. Vine very hardy and healthy. 2-year, No. 1, 10 cts. each, 90 cts. per doz., \$7 per 100.

Delaware. A noble variety; in quality most exquisite; does well here if given a little winter protection. Bunch and berry quite small, but of most beautiful, compact form. Color light red; very sweet, juicy and highly flavored. This is considered one of the best, if not the best American Grape. 2-year, No. 1, 10 cts. each, \$1 per doz.

Moore's Early. Black. This is very valuable. Growing in favor each year. One of the most profitable for market. Two or three weeks earlier than Concord. Bunch medium. Berries larger than Concord. Should be in every garden. 15 cts. each, \$1.50 per doz., \$10 per 100.

Campbell's Early. This much-lauded Grape does not adapt itself to the conditions prevailing in our vineyard; such varieties as Moore's Early, Worden and Concord occupying rows alongside of it, receiving the same care, are more than one hundred times more profitable; in fact, it has not (and is making strong promises not to do so) yet paid the original cost of the vines. 2-year, No. 1, 25 cts. each, \$2.75 per doz.

Agawam. Fine, large, red, borne in clusters of good size; excellent quality, aromatic flavor, peculiar to this variety. Strong growing vine and very productive. Should have winter protection in this locality. 2-year, No. 1, 10 cts. each, \$1 per doz., \$8 per 100.

Brighton. Dark Red. One of the most desirable of the early red Grapes. Should be planted near other varieties, as its blossoms do not always fertilize when alone. This variety should have winter protection. 2-year, No. 1, 10 cts. each, \$1 per doz., \$8 per 100.

Moore's Diamond. This new Grape has evidently come to stay. Color white; berries large, with whitish bloom; skin thin; flesh melting, juicy and sweet to the center. Vine a strong grower and abundant bearer; healthy and very hardy. 2-year, No. 1, 10 cts. each, \$1 per doz., \$8 per 100.

Worden. The best of all black Grapes, and the most productive and satisfactory of all varieties. A strong grower, heavy yielder; healthy foliage; of excellent quality, ripening early. It should be the first to be selected in making a garden selection. 10 cts. each, \$1 per doz., \$7.50 per 100.

Wyoming. One of the earliest red Grapes. Bunch and berry rather small. Vine healthy, hardy and moderately vigorous. Very productive; sweet and desirable. 2-year No. 1, 10 cts. each, \$1 per doz., \$8 per 100.



WORDEN GRAPES

Select Grapes, continued

Woodruff. Very large and handsome. Color, red; strong grower; very healthy and hardy. Pronounced delicious by good judges. A few days later than Concord. 2-year, No. 1, 25 cts. each, \$2.75 per doz., \$16 per 100.

Pocklington. White. Very large and showy. Vine very hardy and vigorous. Bunch and berry large. Ripens about with Concord and is better in quality. 2-year, No. 1, 10^{cts.} each, \$1 per doz., \$8 per 100.

Niagara. White. Quality about like (and ripens soon after) Concord. 2-year, No. 1, 10 cts. each, \$1 per doz., \$8 per 100.

Write for prices on other varieties of Grapes

SELECT CURRANTS

Currants should be planted in good, very fertile soil, with liberal manuring, and the tops should be cut back nearly to the crown, allowing only three or four canes to grow the first year. Plant in rows five to six feet apart and three feet in the row.

Prune more or less every year to get rid of the old wood and keep the bushes open. Currant worms should be vigilantly looked for in spring and summer. These worms can be destroyed by white hellebore, one ounce to three gallons of water, and apply with a sprinkling can or a good spray pump, which is much better. Be sure and use the remedy before the worms appear or immediately afterward.

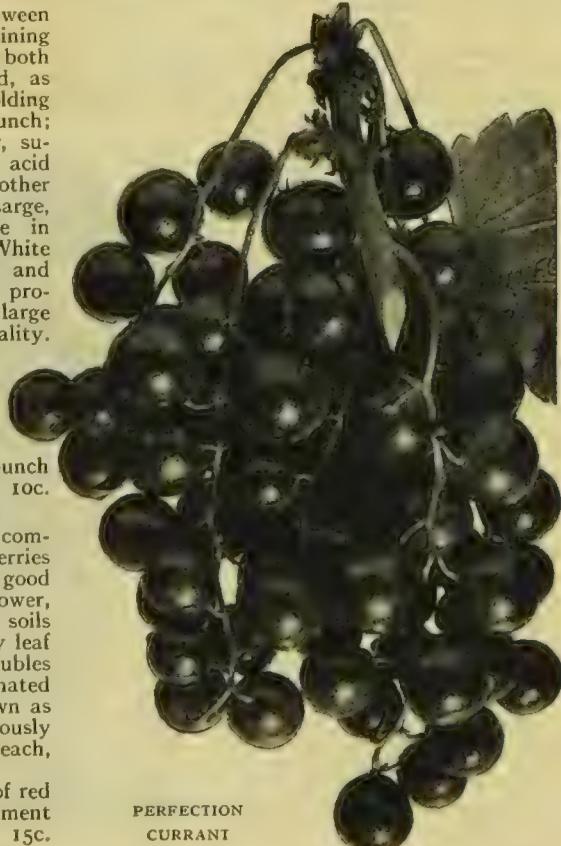
The Currant is well adapted to our soil and climate, and everyone should have a liberal supply. See spraying bulletin, pages 34 to 36, for additional remedies to destroy the Currant worm.

Perfection. A cross between Fay's and White Grape, retaining the valuable characteristics of both parents. Beautiful bright red, as large or larger than Fay's, holding its size to the end of the bunch; easy to pick; a great bearer, superior to any other sort; less acid and better quality than any other large Currant in cultivation. Large, healthy, foliage intermediate in growth between Fay's and White Grape. Kept well fertilized and cultivated they will regularly produce heavy crops of extra large fruit of the very best quality. 2-year, No. 1, 25 cts. each, \$2.75 per doz.

Victoria. This is a standard, very good and reliable Currant, and will suit everybody. Very large, bright red; bunch is very long, very productive. 10c. each, \$1 per doz., \$8 per 100.

London Market. Cluster compact, very long and heavy. Berries large, brilliant red, firm and good quality. Strong, rugged grower, well adapted to a variety of soils and climates. Less injured by leaf diseases and other Currant troubles than any other variety. Originated in Michigan, where it is known as the great money-maker; enormously productive; sells well. 15 cts. each, \$1.50 per doz., \$10 per 100.

Pomona. A new variety of red Currants; reported by experiment stations to outyield all others. 15c. each, \$1.50 per doz., \$10 per 100.



PERFECTION
CURRANT

Select Currants, continued

White Grape. This is justly becoming very popular; very large, white. The best Currant known to us; sweet or very mild acid; good grower and hardy. Has been very satisfactory, and is a Currant we can recommend for any purpose. 15 cts. each, \$1.50 per doz., \$10 per 100.

For want of space we only name other varieties of Currants we have viz.: Cherry, Prince, Albert North Star, Fay's Prolific, Wilder White Transparent and Versailles. 10 cts. each, \$1 per doz.

GOOSEBERRIES

As to soil, cultivation, etc., all we have said concerning the currant applies to the Gooseberry. Who that is acquainted with its different uses and knows the delights of a good Gooseberry pie would ever again willingly be without this wholesome fruit?

Houghton. Medium size, pale red, quite sweet and enormously productive. This we regard as our standby. Has the genuine Gooseberry flavor. 10 cts. each, \$1 per doz., \$8 per 100.

Downing. Fruit nearly twice as large as Houghton. Flesh whitish green, soft, juicy and good. Lacks the genuine Gooseberry flavor of the above but is a most satisfactory kind. Plant vigorous; one of the best. 2-year, No. 1, 15 cts. each, \$1.50 per doz., \$12 per 100.

Champion. About as large as Downing; enormously productive; never known to mildew; one of the very best sorts for home use or market. "I never saw a Gooseberry that will compare with the Champion one year with another, and all things considered." Prof. J. L. Budd, Iowa Horticultural Report, 1897. 2-year, No. 1, 20 cts. each, \$2 per doz., \$15 per 100.



CHAMPION GOOSEBERRIES

SELECT RASPBERRIES

The plan most commonly recommended for laying out the Raspberry plantation is to plant in rows from 6 to 8 feet apart and 2 to 3 or more feet in the row; but recent experience has convinced us that there is a much better plan. We now plant Raspberries in hedge rows; plant 1 foot apart in row and rows 8 feet apart. The dense hedge row smothers out all weeds in and near the row, rendering cultivation easier and quicker; keep this space between the rows well and frequently cultivated.

It is a well-known fact that Raspberries are always larger, finer and sweeter if grown partially in the shade; the hedge row furnishes this condition. It also protects the young canes from being twisted and broken by the wind. The result is more canes, finer fruit, and easier and quicker cultivation.

Give this plan a trial, and you will soon be convinced of its advantages over the old way.

Older. This we consider well worthy to head the list; the greatest drought resister among Raspberries. Is among the earliest and is the largest black-cap we have any knowledge of. Ripens all its fruits perfectly. Last berries as large as the first. Has small seeds, with much pulp and rich juice, therefore the most wholesome of all Raspberries. People who would not dare to use the dry, seedy varieties can use these freely. Originated in Iowa, and is of ironclad hardiness. 5 cts. each, 50 cts. per doz., \$2.50 per 100, \$15 per 1,000.

Kansas. A large, early berry; is very large and fine. Many experiment stations have placed it at the head of the list. A very strong grower; withstands drought splendidly, and is enormously productive. Same price as Older.

Select Raspberries, continued

Gregg. Of great size, fine quality, very productive; has been a standby and very popular for years; several days later than Older and Kansas. No one can afford to be without it. Same price as Older.

Conrath. At present this holds the place for best mid-season blackcap. It is of ironclad hardiness; berries large, shiny black and always good sellers. Enormously productive and a good shipper. 5 cts. each, 50 cts. per doz., \$2.50 per 100, \$15 per 1,000.

Cumberland. This new berry is a very valuable acquisition. Its hardiness has

been proven, and will thrive anywhere that blackcaps can be grown. The quality is very similar and fully equal to Gregg. In spite of its unusually large size, the fruit is possessed of great firmness, and is thus well adapted for standing long shipments. It follows Palmer and Souhegan and precedes Gregg a short time, making it a midseason variety. The bush is exceedingly healthy and vigorous, throwing up stout canes, well adapted for supporting their loads of large fruit. 10 cts. each, 60 cts. per doz., \$3 per 100, \$20 per 1,000.

Plum Farmer. A new variety of much promise. Fruit large, sweet and juicy, but firm and excellent for market. Season, medium early, very productive. Canes very healthy and vigorous. 10 cts. each, 60 cts. per doz., \$3 per 100.

Purple Cap Varieties

Cardinal. This wonderful berry is a surprise in the fullness of its merits—its great growth, extreme hardiness and the exceeding productiveness of its choice red, rich, pure-flavored berries. It will pay. It is not a novelty, but a variety of great merit. The Cardinal is claimed to grow 10 feet high and bear in proportion. Leading horticulturists who have seen this berry say it is one of the wonders of the century. Judge Wellhouse, president of the Kansas State Horticultural Society, said at the meeting of the society that the introduction of the Cardinal Raspberry would add millions

to the wealth of the farmers of the country, because of its inherent vigor and exceeding productiveness. Seven years' trial on our grounds has verified every claim in the above description. 10 cts. each, 75 cts. per doz., \$4 per 100, \$25 per 1,000.

Haymaker. An Ohio seedling of the Shaffer and Columbian type; fruit a little more acid and is later than either, prolonging the season. An enormous producer, excelling the Columbian, not so dark colored and is firmer than either of these varieties. Does not crumble; stands up well in shipping; quality good, either for table or canning. Produces very large crops; stands drought or extreme cold splendidly; a close second to the Cardinal; a little larger berry, but not quite so good in cane or foliage. The last two seasons this variety has been outdoing the Cardinal, and it deserves first place. The flavor is very sweet and rich, making it an especially desirable sort for canning. Very much superior to all others of its class. 10 cts. each, \$1 per doz., \$5 per 100.

Red Varieties

These are multiplied by suckers; they sprout all over the ground near them, and must be confined to narrow rows by running the plow through frequently during the growing season. If given proper care and cultivation they excel all other Raspberries for quality and equal them in productiveness. Taking all their valuable points into consideration, we could not think of discarding them.



CUMBERLAND RASPBERRIES



KING RASPBERRIES

Red Raspberries, continued

King. Pronounced the best early Red Raspberry by many leading horticulturists. Plant a strong grower, very hardy and productive. Berry is firm, a good shipper; large size; ripens with the earliest. 5 cts. each, 50 cts. per doz., \$3 per 100.

Loudon. The superior points of this excellent Raspberry are vigor of growth, large fruit, beautiful, rich, dark crimson color, good quality and great productivity and hardiness, enduring our coldest winters without protection. 5 cts. each, 50 cts. per doz., \$3 per 100.

Colorado Ironclad. A native of Colorado, nearly as large as Cuthbert. Very sweet and delicious, too soft for market but the very best for home use. Canes healthy hardy and productive. 5 cts. each, 50 cts. per doz., \$2.50 per 100.

JUNEBERRIES

Improved Dwarf. This is one of our most wholesome fruits. Uses: A delicious fruit to eat out of hand or for pies and canning. Perfectly hardy and never fails to bear. Fruit resembles the blueberry. Borne in attractive clusters; bluish black; about the size of a good big Houghton gooseberry; blossoms white. Should be in every garden. 20 cts. each, \$1.80 per doz.

SELECT BLACKBERRIES

Practically the same general directions will apply as for raspberry. Our plants are of regular nursery propagation; root-cutting plants are worth tenfold more to the fruit-grower than sucker plants dug from old, exhausted patches, this latter being the cause of most of the failures in attempts to produce this valuable fruit; be sure that you get genuine nursery propagated plants and you will succeed. The Blackberry is a stronger bush than the raspberry and should be planted in rows 8 feet apart and 3 feet in the row. Otherwise its culture is the same as for raspberries.

Snyder. This is the old standby which succeeds anywhere a Blackberry can be grown, and is the best variety for this locality. Extremely hardy, enormously productive, medium size, no hard, sour core; sweet and juicy. 5 cts. each, 50 cts. per doz., \$3 per 100, \$20 per 1,000.



SNYDER BLACKBERRIES

DEWBERRIES

Great care and peculiar treatment are necessary for successful Dewberry growing. They do best on high, well-drained clay soil, but can be grown with reasonable success on almost any good soil. Plant in rows 7 feet apart and 4 to 5 feet in the row. Begin pruning by pinching out the ends of the canes as soon as they reach a length of 3 feet and of the laterals when they reach 2 feet. In the fall prune away all but six of the best canes to each hill and these canes to a length of 4 to 5 feet. Press them closely to the ground lengthwise of the row and cover with 3 inches of forest leaves or by throwing a light furrow upon them. Uncover in spring when all danger of freezing is past and tie to a wire trellis.

Lucretia. Claimed to be the best of the Blackberry family, as productive as any. The berries are far larger and incomparably better than any Blackberry, and of unequalled excellence; soft, sweet and luscious throughout; of brightest, glossy black color. The Lucretia Dewberry has received the indorsement and highest praise from the best horticulturists in the country. Its eminent success in all soils, from Maine to California, from Minnesota to Florida, is something phenomenal in small fruit culture. Its trailing habit renders it less liable to winter-kill. 10 cts. each, 75 cts. per doz., \$3 per 100, \$20 per 1,000.



STRAWBERRIES

No one owning a home or, for that matter one who is renting for a term of years, can put a little money to better use than to buy three or four hundred plants of the standard variety of Strawberry.

Give them the proper care, and a good-sized family can hardly use all the fruit they will produce the next season after planting. Nothing will bring quicker and greater satisfaction to the planter, more keen delight to his children, or lessen the burdens of his good wife in providing for the table than a well kept Strawberry bed.

The best time to plant Strawberries is in early spring and on fertile new soil, or old land brought to a high state of cultivation. If horses are to be used in cultivating, plant in rows $3\frac{1}{2}$ to 4 feet apart, and 1 to 3 feet in the row, but for hand culture, one by 2 feet will answer.

Here is the plan we have found the most profitable and always gives large, fine fruit. Set plants as early in spring as the season will permit; pinch off all the blossom stalks which appear the first season; this throws all the strength into a good stand of new plants for the next year.

About November 1 cover with rye or wheat straw just deep enough so they can come up through it; if too much is on, remove a part of it when spring comes and leave the rest of it to keep the berries off the soil.

Now dig enough of these new plants to start a new bed, which treat as before, and as soon as the crop is off plow the old bed under. Keep this up year after year and you will have the finest fruit that can be produced.

Strawberries, continue↓

Our plants are strictly nursery grown and will give far greater satisfaction than can possibly be obtained with plants taken from an old fruiting bed. Such plants are not worth the digging.

Out of a long list of more than thirty varieties which we used to catalogue we now retain but one, the **Senator Dunlap**—a product of the Mississippi valley and especially adapted to it. Probably no other variety of any fruit was ever introduced which gave as universal satisfaction as this one. Every claim made for it has been more than met. Some of the claims that were made for it, and which have been tested, are:

(1) A clean, healthy and vigorous plant, capable of resisting intense cold, and severe drought, and making an abundance of good and strong plants when almost every other variety fails.

(2) A long-blooming season, with an abundance of pollen, making it one of the best self-fertilizers, and also the best for fertilizing pistillate varieties.

(3) A long-fruiting season—coming in with the medium early, and holding out when most others are gone, developing and ripening all of its berries.

(4) Uniformly large, well-shaped, dark bright red, glossy berries, with a very large bright-green calyx. Berries of the finest quality and flavor.

(5) A good keeper with long-keeping qualities, and attractive appearance, making it more salable than most others.

(6) A good canner, retaining its bright red color in the cans.

We obtained our breeding stock direct from the introducer. Our plants are pure, no other variety being grown upon our grounds, and the best that can be produced. 25 cts. per doz., \$1 per 100, \$3 per 500, \$5 per 1,000.

ASPARAGUS

Asparagus is one of the earliest and finest of spring vegetables; so easy of culture, profitable and wholesome; that every family garden should have a very liberal supply.

Choose well-drained fertile soil, work it up fine and deep, and place the plants in rows 4 feet apart and 8 inches apart in the row; spread out the roots in a trench made deep enough to permit their crowns to be covered with 3 or 4 inches of mellow soil; give the rows a liberal dressing of well-rotted manure at least once each year, and fifteen pounds of salt per rod length early every spring. Do no cutting for use the first season.

Any or all of the following described varieties will give entire satisfaction if managed as above.

Columbian Mammoth White. A distinct variety of strong, vigorous growth, producing very large white shoots that in favorable weather remain white until 3 or 4 inches high, or as long as fit for use. Market gardeners and those growing for canners will find this a very profitable variety. 2-year roots, 50 cts. per doz., 75 cts. per 25, \$1.25 per 50, \$2 per 100. If wanted in larger quantities, write for special prices.

Palmetto. A very early variety extensively grown for early markets; even regular size, of excellent quality, and considered by many as the best variety in cultivation. Prices same as above.

Conover's Colossal. A mammoth variety of vigorous growth; tender and excellent quality; sends up fifteen to twenty sprouts each year, one inch in diameter; color deep green, and crown very close. Prices same as above.

Barr's Mammoth. A variety that comes highly praised. Said to be nearly double the size, and much more productive than Conover's Colossal. Prices same as above.

RHUBARB, or PIE PLANT

Linnaeus. Large, early, tender and fine. 10 cts. each, \$1 per doz., \$6 per 100.

Victoria. A large variety of excellent quality. Same price as Linnaeus.



CONOVER'S COLOSSAL
ASPARAGUS

Ornamental Department

SELECT EVERGREENS

The following are the best sorts of Evergreens to plant in this part of the state for shelter belts and ornament. There is nothing which will add more to the value of a farm or more comfort to the home than a well-arranged plantation of Evergreens.

Their shade is cool and refreshing in summer, and a belt of them is the greatest barrier against winter blasts which can be provided. Our Evergreens have been two and three times transplanted, are heavy-rooted and stocky, thrifty plants.



COLORADO BLUE SPRUCE (see page 24)

How to Plant and Care for Evergreens

Soil. Any soil that will grow corn and garden vegetables is suitable for Evergreens.

Planting. Dig holes large, so that roots are not crowded, using top soil in bottom of hole and also arranging the roots carefully, working the fine soil around and among the roots with your hand. Shake the tree occasionally as the filling is going on, to settle the soil, at the same time raising the tree to the desired depth.

When the roots are well covered, hold the tree upright and firm while you tread the soil very firmly around the tree with the feet.

When this is done you have a basin or hole around the tree that will hold one-half to a pail full of water, according to size of tree. Fill this basin with water, after it is all soaked away—say in half an hour—fill the the basin with good mellow soil which must be left loose and not tramped. Take your tree to place of planting well covered with wet moss and blankets, dipping each root in a barrel or bucket of water just before placing in hole.

Watering. The month of August is the most critical time for newly planted Evergreens, for during this month, unlike deciduous trees, Evergreens make a new root growth, therefore require moisture. If rains have not been plenty the trees should be watered. Make a basin around each tree by pulling away the soil with a hoe and water exactly as described above. If the season is hot and dry, this watering should be commenced the latter part of July and repeated at intervals of two weeks during the entire period of drought.

Cultivation. Good cultivation is very essential to the growth of vegetation of all kinds and nothing appreciates this good cultivation better than trees. They should be cultivated by hoe or horse cultivator, twice a week up to August 1, when a good mulch of partly rotted hay or straw should be given; but care should be taken that green manure is not used as a mulch, as this is detrimental to their best growth.

Seedlings. The largest sizes of Seedling Evergreens should be planted and treated as above; small sizes should be planted in well-prepared beds with dibble, and shaded the first season.

Windbreaks. Distance apart for windbreaks. Spruce, Firs and Arborvitæs: Single row, 4 to 6 feet; double row, 10 feet. Scotch and Austrian Pines: Single row, 8 feet; double row, 10 to 12 feet. White pine: Single row, 8 feet; double row, 12 to 14 feet.

Hedges. Evergreen hedge, American Arborvitæ, sizes from 10 to 18 inches, 15 inches apart; 18 to 24 inches, 18 inches apart; 2 to 3 feet and larger, 2 feet apart. Spruce, 2 to 4 feet apart, according to size.

Select Evergreens, continued

White Pine (*Pinus Strobus*). One of the best Evergreens. Foliage is a warm light green, often with a bluish tinge. The leaves in fives, 3 or 4 inches long, soft and delicately fragrant. It does not grow so rapidly the first few years as some, but after being planted two or three years, it is the most rapid grower of all Evergreens. It accommodates itself to a great variety of soils; it is one of the best for shelter, the best large-growing Evergreen to plant near buildings or along streets to be trimmed up for shade. But few, if any other trees, unite so many elements of beauty and utility as our native White Pine. 4 to 5 feet, 60 cts. each, \$5.50 for 10; 3 to 4 feet, 50 cts. each, \$4.50 for 10, \$40 per 100; 2 to 3 feet, 40 cts. each, \$3.50 for 10, \$30 per 100; 18 to 24 inches, 30 cts. each, \$2.50 for 10, \$20 per 100.

Western Bull Pine (*Pinus ponderosa*). Heavy wooded pine; a rapid grower, forming a tree of great size. Bark reddish and foliage longer and coarser than that of the Red or Norway Pine. A valuable tree for the West and Northwest. Well adapted to dry, windy and exposed positions. Does well on our light, dry, sandy soil. 18 to 24 inches, 45 cts. each, \$3.50 for 10; 12 to 18 inches, 30 cts. each, \$2.50 for 10.

Scotch Pine (*Pinus sylvestris*). A rapid-growing, hardy variety, with stout, erect shoots, and silvery green foliage. Valuable for shelter and makes a good lawn tree, and being one of the hardiest of the Evergreen family it readily adapts itself to the trying climate of Minnesota, the Dakotas and Montana. It also thrives well in the dry plains of Kansas, and is perfectly at home in Illinois, Nebraska, Iowa and other states. 2 to 3 feet, 30 cts. each, \$2.75 for 10, \$25 per 100; 18 to 24 inches, 25 cts. each, \$1.75 for 10, \$15 per 100.

Mugho or Dwarf Mountain Pine. This unique Alpine species forms a dark dome-shaped bush, broader than its height and sometimes almost prostrate. Valuable for planting lawns, terrace banks, hillsides, rockeries, etc. 12 to 18 inches broad, 50 cts. each; 18 to 24 inches broad, 60 cts. each.

Balsam Fir (*Picea Balsamea*). A well-known, popular tree; very handsome while young, assuming the upright, conical form; leaves dark green above, silvery beneath; retains its color throughout the winter; grows quite rapidly when established; desirable in every way. 4 to 5 feet, 75 cts. each, \$5 for 10; 3 to 4 feet, 50 cts. each, \$4 for 10; 2 to 3 feet, 40 cts. each, \$3 for 10; 18 to 24 inches, 30 cts. each, \$2.50 for 10.

Concolor Fir (*Picea concolor* of Colorado). This Evergreen is of the rarest beauty, even colored, the same the year round, a rapid grower, and will make a large tree, in this country; should be planted where it will have some protection from southwest winds and sun; this should be included in every collection. 3 to 4 feet, \$3 each; 2 to 3 feet, \$2.50 each.

American White Spruce (*Picea alba*). Pyramidal tree of dense growth, with light, silvery green foliage. A more compact tree in all respects than the Norway Spruce. One of the best for general use and very fine for lawn planting. 2 to 3 feet, 50 cts. each, \$4.50 for 10; 18 to 24 inches, 40 cts. each, \$3.50 for 10; 12 to 18 inches, 30 cts. each, \$2.50 for 10.

Black Hills Spruce. This is the *Picea alba* or the White Spruce, but with the difference, that it seems well adapted for all the regions from which the others are excluded. Growing in a dry climate and often richly colored, it seems to meet the requirements of a vast field in which others will not thrive because of the drouth. 3½ feet, \$1.25 each; 3 feet, \$1 each, \$9 for 10; 2½ feet, 85 cts. each, \$7.50 for 10; 2 feet, 65 cts. each, \$5.50 for 10; 18 to 24 inches, 50 cts. each, \$4.50 for 10, \$40 per 100; 12 to 18 inches, 40 cts. each, \$3.50 for 10, \$30 per 100; 8 to 12 inches, 30 cts. each, \$2.50 for 10, \$20 per 100.



AMERICAN ARBORVITÆ (see page 24)

Select Evergreens, continued

Colorado Blue Spruce (*Picea pungens*). This Evergreen grows over a greater range of territory than any other member of the Evergreen family. Its home is in the clefts and recesses of the Rocky Mountains, growing on barren soil, exposed to the roughest of weathers. It heads the family of Spruces for hardiness and longevity. The name Blue Spruce comes from its color. No description or picture can do this tree justice, as its shiny needles, together with their rich blue coloring, is Nature's grand climax in giving us something that will be a thing of beauty and a joy forever. Our grafted specimens are the brightest blue that it is possible to produce. Illustrated on page 22. Selected blue, \$1 per foot, sizes 1 to 4 feet.

Koster's Grafted Blue Spruce. \$1.50 per foot, sizes, 1 to 2 feet.

Norway Spruce (*Abies excelsa*). A very popular variety from Europe. It has been more extensively planted in this country than has any other Evergreen. In fact, it is so well known as being one of the best Evergreens for ornamental purposes that it is only necessary to say that it is also the most valuable for windbreaks, screens and hedges. 2 to 3 feet, 40 cts. each, \$3 for 10, \$25 per 100; 18 to 24 inches, 30 cts. each, \$2 for 10, \$17.50 per 100; 12 to 18 inches, 20 cts. each, \$1.50 for 10, \$12.50 per 100.

Virginia Juniper (Red Cedar). A well-known American tree which varies much in habit and color of foliage. It succeeds well on the plains of Nebraska and Kansas, where other Evergreens fail, and is very desirable for ornamental purposes, also for windbreaks, shelter belts and hedges. 12 to 18 inches, 25 cts. each, \$2.25 for 10, \$20 per 100.

American Arborvitae (*Thuya occidentalis*). One of the finest Evergreens for ornamental screens and hedges. Grows rapidly and soon forms a most beautiful hedge. It bears trimming to any extent desired and plants that have been rendered compact by clipping retain the fresh green of their leaves in winter better than those with more open foliage. For an ornamental hedge the plants may be set 12 to 16 inches apart. For a screen to grow tall, plant about 2 feet apart. 2 to 3 feet, 40 cts. each, \$3 for 10, \$25 per 100; 18 to 24 inches, 30 cts. each, \$2 for 10, \$17.50 per 100; 12 to 18 inches, 20 cts. each, \$1.75 for 10, \$12.50 per 100.

Siberian Arborvitae. One of the hardest and most compact-growing Evergreens. It grows conical in shape and is very fine for specimens, groups, or shearing. Foliage is a deep rich green. 18 to 24 inches, 50 cts. each, \$4 for 10; 12 to 18 inches, 35 cts. each, \$3 for 10.

George Peabody Arborvitae. One of the most beautiful members of the Arborvitæ group. A vigorous compact grower with beautiful golden green foliage. 8 to 12 inches, 35 cts. each.

Pyramidal Arborvitæ. A superb new and hardy sort, of very compact habit; much better than the Irish Juniper; grows in a perfect column; is rare and beautiful and is largely planted in cemeteries, owing to the small amount of space it occupies. Perhaps the most valuable Arborvitæ in cultivation. 3 to 4 feet, \$1.50 each; 2 to 3 feet, \$1.25 each; 18 to 24 inches, 75 cts. each; 12 to 18 inches, 60 cts. each, \$5 for 10.

SHADE AND ORNAMENTAL TREES

Carolina Poplar. Pyramidal form and robust growth; leaves large, glossy, serrated, of light green color, changing to dark green. Makes a very handsome shade or street tree. Smoke and soot of large cities do not damage its foliage. Perfectly hardy. 10 to 12 feet, 35 cts. each; 8 to 10 feet, 30 cts. each; 6 to 8 feet, 25 cts. each; 1-yr., 2 to 3 feet, \$1.25 per doz.; 3 to 4 feet, \$1.50 per doz.

Sugar, or Hard Maple. One of the most beautiful shade or ornamental trees; when given plenty of room forms a fine, round dense head. In autumn its foliage presents varying and beautiful colors as cold weather approaches, and often becomes gorgeously colored. 10 to 12 feet, 75 cts. each; 8 to 10 feet, 50 cts. each; 7 to 8 feet, 45 cts. each; 6 to 7 feet, 40 cts. each; 5 to 6 feet, 35 cts. each.

Norway Maple. A handsome tree of large growth, forming a wide, round head of spreading branches and having broad, deep green leaves. Strong, compact and vigorous. One of the very best trees for street, park or lawn. 10 to 12 feet, \$1.25 each; 8 to 10 feet, \$1 each, \$8 for 10.

Reitenbach's Norway Maple. Beautiful and striking because of its rich, changing foliage, which is soft green in spring, decidedly purple in midsummer, purplish scarlet in autumn. Vigorous pyramidal, valuable for contrasts. 5 to 7 feet, \$1 each.

Shade and Ornamental Trees, continued

Purple Norway Maple. The gleaming red and purple tints of its young leaves and shoots contrast brightly with the delicate greens of spring. At maturity they are a purplish green, in autumn of pure golden tints and shades. 6 to 8 feet, \$1.50 each; 5 to 6 feet, \$1.25 each; 4 to 5 feet, \$1 each.

Catalpa speciosa. A very hardy tree with large tropical appearing foliage and a free bloomer, followed by long bean-like pods. Desirable for shade and street trees. 7 to 8 feet, 40 cts. each; 6 to 7 feet, 30 cts. each; 5 to 6 feet, 25 cts. each; 4 to 5 feet, 20 cts. each.

Catalpa Bungei (Chinese Catalpa). A curious dwarf that grows only 8 to 10 feet high and twice as broad. Top grafted on tall stems, it is quite as effective for lawns and terrace decorations as the more expensive and tender Bay trees. Grafted fine heads, 6 to 8 feet, \$1 each.

Magnolia acuminata (Cucumber Tree). A hardy pyramidal tree which bears large creamy yellow flowers in midsummer. The fruit cones are large and cucumber-shaped, turning red in autumn. 3 to 4 feet, 60 cts. each.

Magnolia Soulangeana. One of the hardest and best of the foreign Magnolias. Flowers white and purple, 3 to 5 inches across borne just before the massive glossy leaves appear. 2 to 3 feet, \$1 each.

European White Birch. A rapid-growing shade tree of beautiful form. Very desirable for street or lawn planting. By the time the tree is five or six years old the bark of the trunk and larger branches becomes a beautiful silvery white color. Entirely hardy in all parts of the Northwest. Makes elegant shade. 10 to 12 feet, 60 cts. each; 8 to 10 feet, 50 cts. each; 7 to 8 feet, 40 cts. each; 5 to 7 feet, 35 cts. each.

Linden (Basswood). A very graceful and beautiful tree for planting on the lawn. Its leaves are moved with the least breath of air and show the white surface underneath. Its blossoms are delightfully fragrant, and the busy bee delights in their sweetness. 8 to 10 feet, 75 cts. each; 7 to 8 feet, 50 cts. each; 6 to 7 feet, 40 cts. each; 5 to 6 feet, 30 cts. each; 4 to 5 feet, 25 cts. each; 3 to 4 feet, 20 cts. each; 2 to 3 feet, 15 cts. each; 1 to 2 feet, 10 cts. each.

White-leaved Linden. The leaves are green above and silvery beneath. The foliage is especially pretty when tossed about by the wind. 6 to 8 feet, 75 cts. each.

Russian Olive. An extremely hardy tree, with silver foliage, and the most delightfully fragrant when in bloom of anything we have a knowledge of. A small sprig taken into the house will perfume it throughout; the tree attains only medium size. 6 to 8 feet, 40 cts. each; 5 to 6 feet, 30c. each; 4 to 5 feet, 25c. each; 3 to 4 feet, 20c. each.

Horse-Chestnut. A very popular tree for street or lawn planting. Hardy covered in early summer with magnificent spikes of flowers. 5 to 6 feet, 50 cts. each.

Pin Oak. This is considered the most beautiful of all the oaks, and is certainly the most popular for street and park planting. As the tree grows the branches droop until the lower ones touch the ground, giving it a peculiarly beautiful ovate outline. The leaves are deep green, glossy and finely divided, flaming to orange and scarlet in the fall. The avenues of Pin Oaks in Fairmount Park, Philadelphia, are greatly admired. 7 to 8 feet, \$1 each; 6 to 7 feet, 75 cts. each; 5 to 6 feet, 50 cts. each.



NORWAY MAPLE (see page 24)

Shade and Ornamental Trees, continued

Chestnut Oak. Native to dry situations; of tall and beautiful growth. The leaves are shaped like chestnuts. 4 to 5 feet, 75 cts. each.

Bechtel's Double-flowering Crab. Bears masses of double, rose-like flowers of a delicate pink color and most delightful fragrance. Blooms while quite young and as hardy as our native wild crab. 3 to 4 feet, 75 cts. each.

Mountain Ash, Oak-leaved. A handsome and hardy variety, with large and deeply lobed leaves; distinct and fine; covered in autumn with bright scarlet berries. 5 to 6 feet, 50 cts. each; 4 to 5 feet, 35 cts. each.

Sycamore, American (*Platanus occidentalis*). A very rapid-growing, spreading native tree; always clean and healthy. One of the most desirable for shade and street among our native trees. 6 to 8 feet, first-class, 50 cts. each; 5 to 6 feet, 40 cts. each; 4 to 5 feet, 30 cts. each.

Maidenhair Tree (*Salisburia adiantifolia*; *Ginkgo*). An ornamental tree, native of Japan. A very handsome, strange and striking tree; combines some of the characteristics of the evergreens and the deciduous trees. Trees of medium height, fairly rapid in growth and hardy. Its foliage resembles the Maidenhair fern, hence its name. A rare and elegant tree. 5 to 6 feet, 60 cts. each; 6 to 8 feet, 75 cts. each.

White, or American Elm. One of the best shade or street trees. 4 to 5 feet, 20 cts. each; 5 to 6 feet, 25 cts.; 6 to 7 feet, 30 cts.; 7 to 8 feet, 40 cts.; 8 to 10 feet, 50 cts.

Soft Maple. 5 to 6 feet, 25 cts. each; 6 to 8 feet, 30 cts. each; 8 to 10 feet, 35 cts. each.

WEEPING TREES

Birch, Cut-leaved Weeping. Unquestionably one of the most popular of all weeping or pendulous trees. Its tall, slender, yet vigorous growth, graceful drooping branches, white bark and delicately cut foliage present a combination of attractive characteristics rarely met with in a single tree. Entirely hardy; perfect, full-grown specimens are seen in Minnesota, where the mercury drops to 30° to 40° below zero. 10 to 12 feet, \$1.50 each; 8 to 10 feet, \$1.25 each; 7 to 8 feet, \$1 each.

Camperdown Weeping Elm. This forms one of the most picturesque drooping trees. It is of rank growth, the shoots often making a zigzag growth outward and downward of several feet in a single season. The leaves are large, dark green and glossy and cover the tree. 2-year heads, \$1.50 each; 1-year heads, \$1.25 each.

ORNAMENTAL SHRUBS AND FLOWERING PLANTS

Lilacs, Budded Varieties. Nothing is more beautiful than a clump, hedge or screen of these, and they should go into every border. In many country dooryards the neglected lilacs continue to bloom with a fragrance and beauty that is surpassed by no other shrub. The following varieties are the most choice selections, and will give a succession of bloom for many days.

Alphonse Lavalle. Large panicles of double violet-blue flowers. 4 to 5 feet, 40 cts. each.

Belle de Nancy. Double white flowers that are tinged with purple. 4 to 5 feet, 40c ea.

Frau Dammann. One of the best; a free bloomer, with medium-sized white flowers, borne in large panicles. 4 to 5 feet, 40 cts. each.

Mme. Abel Chatenay. Pure white flowers in compact panicles. 4 to 5 feet, 40c ea.

President Grevy. The individual flowers are very large and double; a beautiful blue in color. The panicles are larger than those of any other variety. 4 to 5 feet, 40c ea.

Senateur Volland. A good variety, with double rosy-red flowers. 4 to 5 feet, 40c ea.

Ludwig Spaeth. The single flowers are a very dark purple, and distinct from other kinds. 4 to 5 feet, 40 cts. each.

Lilac. Common purple. 4 to 5 feet, 25 cts. each.

Tamarix. This hardy and very beautiful shrub, of strong but slender upright growth, is clothed with foliage as light and feathery as that of the asparagus. Its delicate fringing flowers are borne in spikes; color, a warm shade of pink or red. Very ornamental at the back of shrubbery, and desirable for decorations and bouquets. 3 to 4 feet, 30 cts. each.

Snowball. A well-known shrub; produces its snowy white flowers in large balls or masses in June; for the best effect, trim into a round ball-shaped bush. 2 to 3 feet, 30 cts. each.



HYDRANGEA PANICULATA GRANDIFLORA

Ornamental Shrubs and Flowering Plants, continued

Hydrangea paniculata grandiflora. A fine shrub and very popular, quite hardy, easy to grow and blooms the same year they are set out. The flowers are in immense panicles, creamy white when first open, changing to pure white when fully set out and turning pink and bronze with age; blooming in August and September. The flowers will be larger and finer if given good rich soil, and the plants cut back each spring fully one-half the past season's growth. 18 to 24 inches, 25 cts. each; 2 to 3 feet, 35 cts. each. Tree form, 2 to 3 feet, 75 cts. each; 3 to 4 feet, \$1 each.

Hydrangea arborescens grandiflora. A new variety with large white flowers resembling snowball. Flowers are produced from June till late in August. 2 feet, 60 cts.

Mock Orange (Syringa). One of the most desirable shrubs. Its beauty and fragrance make it a universal favorite. They grow to a height of 8 to 10 feet, and bloom profusely in the spring. 2 feet, 25 cts. each. Heavy clump, \$1.

Spireas. Low-growing shrubs well adapted for hedges, shrubberies or single specimens on the lawn. Grow in almost any moderate moist soil and with very little care or attention.

Spirea Anthony Waterer. One of the most charming of all small shrubs, seldom growing larger than 2 to 3 feet. Its handsome trusses of deep crimson flowers are produced in great profusion from early spring until fall. Beautiful single, in clusters or as a low hedge. 18 to 24 inches, 35 cts. each.

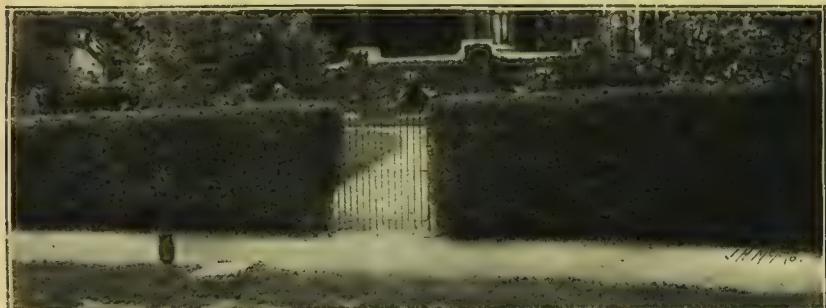
Spirea Van Houttei. The grandest of the Spireas. Perfectly hardy. A strong grower and a profuse bloomer. Has small, delicate, white blossoms, borne in clusters that almost entirely cover the bush about June 1. Very handsome, even when not in bloom. Often called Bridal Wreath. Suitable for low screens, hedges and borders. 12 to 18 inches, 15 cts. each, \$8 per 100; 18 to 24 inches, 20 cts. each, \$12 per 100; 2 to 3 feet, 25 cts. each, \$15 per 100; 3 to 4 feet, 30 cts. each, \$20 per 100. Heavy clumps, 75 cts. each.

Privet, California. These ideal hedge plants have such an array of good points that we can no longer spare them for hedges alone. They are moderately hardy, nearly evergreen, grow freely in all soils, have a dense, neat habit, and bloom profusely. The flowers are white, fragrant, and borne in graceful racemes or clusters through June and July. The leaves are small, oval and glossy. 2 to 3 feet, 25 cts. each, \$1.25 per doz., \$10 per 100.

Privet, Amoor. Some hardier than the California Privet. A desirable shrub to use for ornamental hedges in this part of Iowa. 18 to 24 ins., 25c. each, \$15 per 100.

Berberis Thunbergii. A perfectly hardy Japanese form which is unequalled for low hedges. Produces an abundance of white flowers in May and is all aglow with scarlet leaves and berries in the fall. 12 to 18 inches, 20 cts. each, \$12 per 100; 18 to 24 inches, 25 cts. each, \$17.50 per 100.

Golden Glow. A hardy perennial plant, growing 8 feet high; branching freely and bearing by the hundreds on long, graceful stems, exquisite double blossoms of the brightest golden color and as large as the cactus dahlia. Strong roots, 25 cts. each.



HEDGE OF CALIFORNIA PRIVET (see page 27)

Ornamental Shrubs and Flowering Plants, continued

Yucca filamentosa. An interesting and tropical appearing plant which will endure any of our Northern winters and is therefore valuable for those localities where flowering plants are scarce. It is an evergreen perennial, throwing up in the middle of the summer flower-stalks 3 feet in height, bearing a profusion of creamy white, bell-shaped blossoms. One of the most beautiful plants for the lawn. 2-year plants, 50 cts. each.

CLIMBING VINES

Trumpet Flower. A splendid vine, vigorous and hardy, and a very rapid grower, well adapted for covering unsightly objects. The flowers are magnificent, being fully .4 to 5 inches long and in clusters. 25 cts. each.

Wistaria (Chinese). A most beautiful climber of rapid growth, when well established growing at rate of 15 or 20 feet in a season, and producing long, pendulous clusters of pale blue flowers, resembling in size and shape a bunch of grapes; sometimes gives a second crop of flowers in the fall. 2-year plants, 50 cts. each.

Clematis Paniculata. This wonderful flower blooms in September. It is one of the finest of hardy climbers, with handsome foliage, of very vigorous, rapid growth, and produces in late summer dense sheets of medium-sized pure white flowers of the most pleasing fragrance. Each branchlet is thickly set with these showy flowers and altogether produce a most gorgeous sight. This is a new Japanese plant and perfectly hardy and finely adapted to use for any covering purpose. Strong, field-grown, 50 cts.

Clematis Jackmani. This is perhaps the best known of the newer fine perpetual Clematis, and should have credit of the great popularity now attending this family of beautiful climbers. The plant is free in its form of growth and an abundant and successional bloomer, producing flowers until frozen up. The flowers are large, of an intense violet-purple remarkable for its velvety richness. Has no superior. July to October. Strong, field-grown, 75 cts. each.



CLEMATIS PANICULATA

Clematis, Madame Edouard Andre (The Red Clematis). An entirely distinct and most novel variety, and the nearest approach to a bright red ever sent out. The plant is a strong, vigorous grower, being a hybrid of the popular Jackmani, which it resembles in freedom of bloom, strong, vigorous growth and shape and size of flower, but is a distinct carmine-red color of a most pleasing shape, entirely different from all other varieties. Strong, field-grown, 75 cts. each.

Henryi. Best white variety. Fine, large creamy white flowers. Strong grower; very hardy; perpetual bloomer. Strong, field-grown, 75 cts. each.

ROSES

Rose-bushes should be planted one to two inches deeper than they stood in the nursery and the tops cut back to about three inches of the ground; then give them a mulching of manure from the horse-stable. Spray with Bordeaux for mildew and any of the arsenicals for insects.

Climbing Roses

Crimson Rambler. A genuine acquisition, a novelty of high order, and of most distinct characteristics. It is a running or climbing Rose of vigorous habit, strong and rapid growth, with handsome, shining foliage and marvelous clusters of the brightest crimson semi-double roses. Its form, brilliancy, abundant bloom, and the wonderful durability of the flowers make Crimson Rambler an assured favorite. For verandas, walls, pillars and fences, it is a most suitable plant. 2-year blooming plants, 50 cts. each.

Prairie Queen. The well-known climber. Flower double, beautiful pink, fading to nearly white. 2-year, blooming plants, 35 cts. each.

Persian Yellow. Perfectly hardy climber. Brightest yellow of all Roses, produces a great abundance of medium-sized flowers in June. 2-year, No. 1, 50 cts. each.

Tausendschon. A rapid-growing, almost thornless climber of exceptional value and attractiveness. Its many flower clusters show every shade of pink Rose and crimson with white and yellow variegations. Strong, 2-year plants, 75 cts. each.

HALF-CLIMBING ROSES

Greville, or Seven Sisters. Large clusters, with flowers varying from white to crimson. Luxuriant dark green foliage; perfectly hardy. 2-year blooming plants. 35c. each.

Baltimore Belle. Pale blush, shading to rose-color, very double, flowers in beautiful clusters, the whole plant appearing a perfect mass of bloom. One of the best climbing Roses, but must be protected in winter. 2-year blooming plant 35 cts. each.

Hybrid Perpetual Roses

Baby Rambler. Really a dwarf Crimson Rambler. A true perpetual bloomer, perfectly hardy, free from insects and diseases, and of easy culture. A mass of bloom every day from May until frost. It will take the place of soft plants for bedding, edging walks and driveways, park and cemetery use, house culture etc. 2-year, field-grown, 75 cts. each.



CRIMSON RAMBLER ROSES

Hybrid Perpetual Roses, continued

Ulrich Brunner (Hybrid Perpetual). Raised from Paul Neyron. Brilliant cherry-red; flowers of fine form carried well upon the plant, petals of great substance, plant vigorous, hardy and free from mildew. One of the best for forcing and open air culture. 2-year, field-grown, 50c. each.

American Beauty. Rich rosy crimson, exquisitely shaded. A standard variety, moderately hardy. 2-year, strong plants, 50 cts. each.

Frau Karl Druschki. A pure, white, free-flowering, large-sized Hybrid Perpetual. Remarkably handsome; bright, heavy foliage, and strong, upright growth. The bloom is perfect in form, on fine long stems. No other perfectly hardy Rose can compare with this in form, color and general finish. 2-year, field-grown, 50 cts. each.

Madame Plantier. Pure white; produced in great abundance early in the season. An excellent hardy white Rose. 2-year, blooming plants, 35 cts. each.

Harrison Yellow. Here we have a very fine bright yellow double Rose; hardy and a profuse bloomer. 2-year plants ready to bloom. 50 cts. each.

General Jacqueminot. This may truthfully be called the rose for the million, for it is indeed a universal favorite. Bright scarlet, exceedingly rich and velvety. Grown extensively. 2-year-old blooming plants. 35 cts. each.

Paul Neyron. Flowers often 5 inches in diameter; color deep, clear rose, very fresh and pretty. A strong, healthy grower, with clean, glossy foliage and one of the most prolific bloomers in the hybrid class; young plants in nursery rows bloom almost without intermission from June to late October. 2-year blooming plants. 35 cts. each.

Prince Camille de Rohan. Deep velvety crimson, very dark, almost black, very large, moderately full; a splendid Rose. By all means include this in your collection. Strong blooming size, 2-year. 50 cts. each.

La France. Deservedly popular. Buds and flowers are of lovely form and grand size, exceedingly sweet; color fine peach-blossom, elegantly clouded with rosy flesh. Begins to bloom early and continues until stopped by freezing weather. Strong field-grown, blooming size. 50 cts. each.

Moss Roses

Glory of Mosses. Pale rose, very heavily mossed; one of the best. 2-year blooming plants. 35 cts. each.

Luxembourg Moss. Large cupped and a very fine Rose. A luxuriant grower and free bloomer. 2-year blooming plants. 35 cts. each.

Rugosa and Hybrid Roses

Rosa rugosa. Foliage shiny bright green. Flowers deep rose produced in clusters, followed by beautiful bright red berries in autumn. Perfectly hardy and well adapted for hedges. Strong, 2-year plants. 30 cts. each, \$20 per 100.

Conrad Ferdinand Meyer. A hybrid combining the ornamental foliage of the rugosa with the beautiful fragrant flowers of the hybrid perpetuums. Flowers large double and a delicate silvery pink. 2-year. 50 cts. each.



LA FRANCE ROSES

DOUBLE HERBACEOUS PEONIES

The Herbaceous Peonies have always held an important place among hardy plants, and with the wonderful improvements made during recent years have established themselves among the leaders for popular favor.

Their requirements are simple; a good, rich, deep soil and an open, sunny position, if possible, which, however, is not absolutely necessary, as they thrive almost as well in a partially shaded position. A liberal supply of water through their growing season, is sufficient to give an abundance of flowers which rival the finest roses in coloring and fragrance, and produce during their flowering season a gorgeous effect not equaled by any other flower.

We have during the past season feasted our eyes on the glowing splendors and inhaled the delicate fragrance of many varieties in full bloom.

Why these beautiful and fragrant flowers have been neglected so long is owing to the fact that people are not acquainted with them. You need only to see them and you acknowledge their excellence. They are the flowers that never fail; they are hardy in the frozen North and in the sunny South, requiring no protection whatever; and once planted take care of themselves, increasing in size and beauty each year. Truly a plant for everybody.

Plant in the fall, if possible, or very early in the spring. It is cruel to send for them when leaved out. Plant in September, and in November they will have rootlets as long as your finger. Have the ground rich and spade it two feet deep. Plant your roots with the crowns about three inches below the surface, and keep out the weeds, and you can let them stand five years. We take pleasure in being able to offer our friends the following very choice list at reasonable prices. They are strong divided roots, and few of them will fail to bloom the first season after setting. A hedge of Peonies is a most beautiful ornament, and a joy never to be forgotten. Will make special prices on collections for hedges. Please write if interested.

Tecumseh. Deep red; largest and solidest of all peonies; extra rare and a grand flower. \$1.50 each.

Plutarch. A satin crimson; exceedingly brilliant and striking, with pond lily fragrance; a very charming flower. \$1 each.

L'Esperance. Is among the finest France has given us. It is in the Diamond list, which marks the very best in the collection of a leading French florist. It stands in the front rank also of M. Koster of Holland. They are fine prolific bloomers, vivid rose-color, compact in form, early bloomers, making them valuable for cut-flowers and decorations. They are highly perfumed, very vigorous and multiply rapidly. These can now be had at so reasonable a rate that they should be in every collection. 50c.



FESTIVA MAXIMA PEONY

Double Herbaceous Peonies, continued

Andre Lauries. Is deep, bright red, very double, a grand flower, and it loves deep, rich soil. 25 cts. each.

Marie Lemoline. This flower fills all the requirements we demand of our favorites. It is as sweet as a rose. It opens slightly yellow, then fades to purest white. It is a wholesale bloomer, a very winsome and attractive flower. Never leave this out of your collection. 50 cts. each.

Francois Ortegal. Is of French origin. It is very brilliant crimson, giving us a blaze of splendor, so deep as to verge on the purple. It is a vigorous and striking flower with a delightful, spicy fragrance. No collection can be full without it. 50 cts. each.

Rubra triumphans. Has flowers of brilliant glowing crimson. They are also sweet-scented. They do not bloom so soon as some others. The plants seem to require age. Just wait. Give them a chance and they will more than make up for lost time. 25 cts. each.

Grandiflora rubra. This is a very king among flowers, and one of the latest. It seems to hold itself in reserve, gathering strength to put forth an exhibition of splendor. The flowers are of immense size, intense and glowing with effulgence. Massive and grand, it brings up the rear of this great army of Peonies 2,000 strong. You look at them and think the best has been reserved till the last, and yet it is hard to call any one the best in this great procession which has during the season passed before us. 30 cts. each.

Richardson's Rubra. Deep crimson, with purple shading; a grand, fragrant, full-orbed flower. 75 cts. each.

Festiva maxima. It is a large ball of white, with center petals dashed with red; my special favorite for a white flower. \$1 each.

Agnes Mary Kelway. Sweetly fragrant, light rose guard, yellow petaloids, with rose tuft; a most lovely flower. 50 cts. each.

Grandiflora rosea. Is a host in itself. The outer and center petals are red. It is slightly fragrant; a prolific bloomer; robust and vigorous. 35 cts. each.

Victoria Tricolor. Is one of the most vigorous and prolific bloomers we have. Fragrant, though the flowers cannot rank among the finest, yet is very desirable. 25 cts. each.

The Bride. A small, delicate, sweet flower; winsome, attractive and well-named. 40 cts. each.

Grandiflora carnea plena. Full-orbed, robust and grand; packed solid with its lovely pink petals; a charming flower of medium season. 40 cts. each.

Magnifica. Large, delicate and fragrant; red, turning to pink. 35 cts. each

The Queen. Single, large white, with cushion of pure gold. 35 cts. each.

Golden Harvest. Worthy a place in the front rank; it is sweet in fragrance, full bloomer, and better than many costly foreigners. 75 cts. each.

Reeves. Immense flower, free bloomer; light rosy pink, center petals splashed with red. 30 cts. each.

Madame Chaumy. Is a late pink; perfect in form and very fragrant; would do best in partial shade, as its buds are a little sensitive to the direct rays of the sun. 30 cts. each.

Fragrans. An excellent variety; late; deep red. 20 cts. each.

Alba sulphurea. This is a fine flower and a favorite. 25 cts. each.

Pottsii. A splendid flower, deep crimson. 30 cts. each.



RUBRA TRIUMPHANS PEONIES

FRUIT TREE SEEDLINGS FOR GRAFTING

Apple Seedlings, 3-16 inch, and up, straight.....	}	Price on application.
Plum, native seedlings, 3-16 inch and up.....		
Plum, native seedlings, 2-16 to 3-16 inch.....		
Plum, native seedlings, under 2-16 inch.....		

Pear, French seedlings, No. 1, 3-16 and up.....

FOREST TREE SEEDLINGS

These are just the thing for starting hedges, screens, windbreaks and timber plantations. If wanted in large quantities, write for special prices.

No matter how valuable the land every farmer can make a wood-lot profitable. It can constitute the windbreak and at the same time furnish posts and repair material and fuel. There is much land along streams which might be planted to trees and would become very valuable instead of furnishing only poor pasture as it does now. The time is soon coming when good timber will be in great demand in this state.

Where planted for groves cultivated crops may be planted between the rows for several years. The land may be planted to corn and a seedling planted in the place of every alternate hill. In this way the seedlings will get the necessary cultivation.

	100	1,000
Ash, American , 6 to 12 inches.....	\$1 00	\$6 00
12 to 18 inches.....	1 25	9 00
Box Elder , 4 to 6 inches.....	1 00	4 50
6 to 12 inches.....	1 25	6 00
12 to 18 inches.....	1 50	10 00
Catalpa, Hardy , 8 to 12 inches.....	1 00	7 50
12 to 18 inches.....	1 25	10 00
18 to 24 inches.....	1 50	12 50
2 to 3 feet.....	1 75	15 00
Elm, White , 6 to 12 inches.....	1 50	6 00
12 to 18 inches.....	1 75	7 50
18 to 24 inches.....	2 00	10 00
European Larch , 6 to 12 inches.....	3 00	
12 to 15 inches.....	5 00	
Honey Locust , 8 to 12 inches.....	1 25	7 50
12 to 15 inches.....	1 50	10 00
Mulberry, Russian , 6 to 12 inches.....	50	5 00
12 to 18 inches.....	75	7 50
18 to 24 inches.....	1 00	10 00
Osage Orange , 6 to 12 inches.....	50	3 00
12 to 18 inches.....	75	5 00
Soft Maple , 6 to 12 inches.....	60	4 00
12 to 18 inches.....	75	7 50
18 to 24 inches.....	1 00	10 00
Walnut, Black , 12 to 18 inches.....	1 50	15 00
18 to 24 inches.....	2 00	20 00

Soft Maple. A very rapid growing tree, valuable for fuel and windbreaks. Plant 8 by 8 or 6 by 8 feet. Maple groves have yielded over \$10 per acre net annual returns at about twenty-five years after planting.

Catalpa speciosa, or **Hardy Catalpa**. We grow these from seed gathered from native-grown trees and know them to be of the hardy sort. Catalpa is one of the most valuable trees for posts and poles, a very rapid grower, reproduces very quickly from the stump and the wood is one of the most durable in the soil. Plant 8 by 8 in deep rich soil, let grow for two years then cut back to the ground and train up one sprout for straight thrifty bodies. They require good cultivation for several years.

European Larch. Has produced higher annual net returns than any other tree in Iowa. It makes durable posts and poles and good fuel. Plant 6 by 4 feet in any good land not excessively wet. It starts to grow very early in the spring, consequently we will send these out by express before our regular deliveries.

Honey Locust. The most valuable two-purpose tree. It produces excellent posts and the best of fuel and is one of the most rapid growers. It is unexcelled for windbreaks and makes an excellent hedge which will stand severe pruning.

MISCELLANEOUS

Raffia. Best Madagascar, for tying buds. Lb. 15 cts.; 10 lbs., 12 cts. per lb.

Grafting Thread, Unwaxed. 10 cts. per ball. **Waxed.** 15 cts. per ball. If by mail, add 2 cents per ball for unwaxed and 7 cents per ball for waxed.

Grafting Knives. Hand forged, razor steel, 40 cts. each; by mail, 45 cts.

Budding Knives. Ebony handle, bone tip for raising bark. finest razor steel, 75 cts. each; add 5 cts. for postage.

Pruning Shears. Best made, \$1.25 each; by mail, \$1.35.

Honey Bees, Queens. Write for prices.

In our hothouse we grow a general line of Garden and Vegetable Plants for early planting, including Cabbage, Tomato, Cauliflower, Eggplant, Pepper, Celery and Sweet Potato. Prices sent on application.

Root Grafts. We have a large stock of most kinds of fruit tree seedlings, and will be prepared to put up first-class root grafts of almost everything mentioned in this catalogue. Send list of grafts wanted, and we will make the price right.

Spraying Department

It is one thing to receive trees and plants from the nursery in first-class, healthy shape and quite another matter to *keep* them so; yet the whole success of your planting, whether fruit or ornamental, depends on your efforts to keep them in growing condition.

Spraying is nowadays recognized as the easiest and most effective method for keeping trees and plants healthy, and we are therefore glad to print here a number of standard formulas for spraying solutions, easily prepared, which will prove very effective in fighting the diseases for which they are recommended.

Next to having the solutions prepared right, nothing is more important than selecting a suitable pump.

We ourselves are hearty advocates of spraying, and strongly recommend that an outfit be selected which is *built to last*. The ideal pump is one that is brass-fitted—that is, having valves and all parts coming into contact with the liquid made of brass, which will not become corroded by the chemical action of spraying solutions.

Choose a good nozzle—one that will not easily clog and that will force the spray upon the trees in a fine mist.

Above all, remember that in growing both ornamental trees and fruit trees, spraying has made success out of evident failure, times without number—so keep at it, and don't get discouraged.

SPRAYING FORMULAS

Insecticides for Biting Insects

ARSENIC, SODA AND LIME

White arsenic.....	1 pound
Sal-soda crystals.....	4 pounds
Water.....	2 gallons

Boil the above ingredients for fifteen to twenty minutes, when the arsenic should be dissolved, leaving only a little sediment. This stock solution may be kept indefinitely, but should be labeled "poison."

To prepare the spraying mixture add 1 quart of the stock solution to 40 gallons of water in which two pounds of fresh lime have been dissolved.

In employing these formulas use great care. The pots and utensils used in preparing the solution should not be employed for other purposes. The arsenic should be plainly labeled, lest it be mistaken for something else.

PARIS GREEN

Paris green.....	1 pound
Lime (fresh).....	1 pound
Water.....	100 to 200 gallons

LEAD ARSENATE

Lead acetate (sugar of lead).....	12½ ounces
Sodium arsenate.....	5 ounces
Water.....	50 gallons

Pulverize and dissolve the acetate and arsenate *separately* in small quantities of water, pour together in barrel of water and stir thoroughly. While more expensive than Paris green, this has the advantage of being more adhesive and less liable to burn foliage. A prepared form of this is sold in the trade under the name "Disparene."

ARSENITE OF LIME

White arsenic.....	2 ounces
Sal-soda.....	½ pound
Fresh lime.....	4 pounds
Water.....	50 gallons

Boil the arsenic and soda together in a small quantity of water till the arsenic is dissolved, slake the lime, strain and add to the barrel of water; then add the soda and arsenic solution and stir for a few minutes.

Spraying Formulas, continued

HELLEBORE

White Hellebore..... 1 ounce
 Water..... 2 gallons
 Or to be dusted undiluted on attacked plants.

Insecticides for Sucking Insects**KEROSENE EMULSION**

Kerosene (coal oil) 2 gallons
 Rain water..... 1 gallon
 Soap..... $\frac{1}{2}$ pound

Dissolve soap in water by boiling; take from fire and while hot turn in kerosene and churn briskly for five minutes. To be diluted before using, with nine parts water, for scale, insects and all sucking insects.

TOBACCO INFUSION

Tobacco (waste stems).... 1 pound
 Boiling water..... 4 gallons

Add hot water to tobacco and let stand until cold. Strain and add one pound of whale oil soap or two pounds of soft soap to each 50 gallons of infusion. For aphids.

PYRETHRUM, or INSECT POWDER

Pyrethrum powder..... 1 ounce
 Water..... 3 gallons

For dry application.—Mix thoroughly one part by weight of insect powder with four of cheap flour and keep in a closed vessel for 24 hours before dusting over plants attacked.

SULPHUR-LIME-SALT MIXTURE

Quicklime (fresh)..... 15 pounds
 Sulphur..... 15 pounds
 Salt..... 15 pounds

Place lime in kettle; add sufficient water to slake and stir in sulphur while slaking. Boil until dissolved, an hour or more. Add salt and boil fifteen minutes longer. Add sufficient water to make 50 gallons and apply while warm. *Apply only to dormant trees.*

Fungicides**BORDEAUX MIXTURE**

Copper-sulphate..... 4 pounds
 Quicklime (not air-slaked) 4 pounds
 Water (one barrel)..... 40 to 50 gallons

Dissolve the copper-sulphate (blue stone) by suspending it in a wooden vessel such as a half-barrel containing 25 gallons of water; slake the lime in another vessel. The slaking should be done slowly, otherwise it is apt to be granular. Now dilute the slaked lime in 25 gallons of water, and pour it and the solution of copper-sul-

phate into the spray barrel at the same time (See illustration). Do not pour in first one and then the other, as this will not allow the proper combination of chemi-



Proper method of preparing Bordeaux Mixture.
 Courtesy The Deming Company, Spray-Pump Manufacturers, Salem, Ohio.

cals to take place and a sediment will be formed that will clog pump and nozzles.

It is well to strain the solutions as they are poured together, for which purpose a copper strainer having 18 to 24 meshes to the inch is recommended.

Do not add the lime until ready to apply the mixture.

Stock solutions of dissolved copper-sulphate and lime may be prepared and kept in separate covered barrels throughout the spraying season. The proportions of blue stone, lime and water should be carefully entered.

DILUTE BORDEAUX MIXTURE

This mixture is made exactly as the above with the exception that only two pounds of copper sulphate and two pounds of lime are used to each barrel of water. This mixture should be used for trees having a tender foliage, such as the peach and Japanese plum.

BORDEAUX MIXTURE TEST

The quantity of lime required in Bordeaux Mixture varies considerably with the quality of rock from which it is made. For this reason it is advisable to test each lot of the Bordeaux Mixture after it is made up.

To ascertain if sufficient lime has been added, place a small quantity of the Bordeaux Mixture in a saucer and add two or three drops of the prussiate of potash. If this changes the Bordeaux Mixture to a reddish brown color, there is not enough lime present; add more lime water and test again.

The prussiate of potash may be obtained at any drug store in the crystallized form,

Spraying Formulas, continued

The stock solution for the entire season may be prepared by adding just enough water to dissolve the crystals. Only a drop or two is required for each test and 10 or 15 cents' worth is ample for the entire season.

COMBINATION OF FUNGICIDE AND INSECTICIDE

When spraying for a fungous disease, except when plants are in the dormant state, an arsenical mixture may be added to the Bordeaux to advantage and the spraying will be effective against the biting insects as well as plant diseases. To the Bordeaux add the usual amount of Paris green, lead arsenite or arsenite of lime, letting the Bordeaux answer for the specified amount of water.

AMMONIACAL COPPER CARBONATE

Copper carbonate..... 5 ounces
Ammonia..... 3 quarts
Water (one barrel) .. 40 to 50 gallons

Dissolve the copper carbonate in the ammonia. The ammonia and concentrated solution may be kept in glass or stone jars tightly corked. When ready for use, dilute with water. This is a clear fungicide and is convenient to use when Bordeaux Mixture would stain the fruit.

POTASSIUM SULPHID (Liver of Sulphur)

Dissolve two ounces in six gallons of water and apply at once. This mixture

deteriorates rapidly and should not be prepared until ready for application. This is an effective spray for mildew on gooseberries and currants.

CORROSIVE SUBLIMATE

For potato scab soak the tubers for one and one-half hours in a solution of two ounces of corrosive sublimate in 16 gallons of water. When dry cut up for planting.

Corrosive sublimate is a fatal poison if taken internally. It also corrodes metals. The solution should therefore be made in wooden vessels. All treated seed should be planted, and any solution left over should be poured on the ground.

FORMALINE (Used also for Potato Scab)

Soak tubers for two hours in a solution of commercial formaline, 8 ounces (40 per cent solution) in 15 gallons of water.

DUST SPRAYS

Insecticides or fungicides may be used in dust form and applied by a dust spray machine. They should be applied with slaked lime, land plaster or some other perfectly dry powder. Use Paris green and other arsenites at the rate of one pound to ten pounds of the dry powder. Bordeaux may be made in the usual way and water evaporated and residue pulverized and applied dry.

Summary of Treatment For Fruits and Vegetables Not Included in Spraying Calendar on Following Page

CABBAGE. The chief enemies of this plant are Caterpillars and Cabbage Aphis. Caterpillars are controlled by spraying with a 10 per cent solution of kerosene emulsion. Use arsenate of lead on the young plants, *but not after the heads commence to form*. Cabbage Aphis may be destroyed by spraying with a 15 per cent solution of kerosene emulsion.

CUCUMBERS. In general, Cucumbers are affected by the same insects as infest Melons, treatment for which is recommended below.

MELONS. Plant Lice may be controlled by spraying the under side of the leaves with a 10 per cent solution of kerosene emulsion. Striped and Flea Beetles will disappear if fresh powdered tobacco is scattered about the base of the young plants. For Worms, spray with arsenate of lead as soon as these are noticed. Cucumber Mildew makes the leaves turn yellow or brown in spots. When vines are about half-grown, spray with Bordeaux mixture, repeating two or three times at intervals of two or three weeks.

POTATOES. Potato Beetles appear as soon as the vines are up. Spray with arsenate of lead. Kill the early broods and the later ones will be much less numerous. For Potato Blight, spray with Bordeaux Mixture when vines are half-grown; repeat after each rain. If beetles are present, add arsenate of lead. This spraying increases the yield of potatoes very greatly.

STRAWBERRY. The main enemies of the Strawberry are: Slugs, which eat the leaves of young plants, and Blight, which attacks the foliage, causing it to appear spotty. For Slugs, spray with arsenate of lead before and after the bearing season. For Leaf Blight, spray two or three times each season with Bordeaux mixture, making at least one application before the blossoms open.

ORDER SHEET

LINN COUNTY NURSERIES

CENTER POINT, IOWA

-191

FORWARD TO

Name of Person (Ladies please sign Miss or Mrs.)	P. O. Order - \$
Name of Postoffice	Draft - - - \$
Name of Express Office	Express Money Order - \$
Name of County	Cash - - - \$
Name of State	Total - - - \$

No Order Filled for Less than \$1.00.

SUBSTITUTION—It frequently occurs that special varieties ordered have been in great demand and the stock has been exhausted. In such cases we **WILL NOT SUBSTITUTE UNLESS YOU ASK US TO**, but your money will be returned. If you want us to send the next best, we will. Shall we substitute or not? **Yes or No?**

ORDER SHEET—Continued

Please give names and addresses of a few friends who are interested in fruit-growing

THE HANDY SPRAY CALENDAR. A Condensed Table of Diseases and Remedies

Prepared by Howard Evans Weed, M.S., formerly Entomologist and Horticulturist, Mississippi Experiment Station. Reproduced by permission of the Denning Co., Spray Pump Mfrs., Salem, O.

Plant	Insects and Diseases	Remedy	First Application	Second Application	Third Application	Remarks
APPLE	San José Scale;	Lime-sulphur or soluble oils, as recommended.	Early in November.	In February, same as first.	For summer treatment, use 10 per cent kerosene.	San José scale cannot be destroyed in a single treatment, but is easily kept in check by a little effort. If only a few trees of an orchard are affected, burn them off.
	Oyster-shell and Scurvy Scale, Woolly Aphis.	Soluble oils as recommended.				
	Cooling Moth, Bud Moth, Apple Scal.	Bordeaux and arsenate of lead mixed.	Use when young first hatch in early spring.	Repeat in ten days.		
CHERRY	Black Aphis and Rot.	Kerosene, soluble oils as recommended.	Early spring, before the buds swell.	As soon as blossoms fall.	Two weeks later.	If Woolly Aphis is present on roots, dip stock in 1-5 solution of recommended prepared oil compound.
GRAPE	Rot and Mildew.	Soluble oils as recommended as soon as plant life are noticed. Bordeaux when fruit has set.		Repeat if needed.		A fourth application will pay. If bitter rot is present, a fifth application should be made.
PEACH	Rot and Leaf-Curl.	Bordeaux.	When buds first swell.	Repeat in ten days.	Repeat in ten days.	Cherry Aphid is one of the hardest insects to kill and the kerosene should be used as strong as possible, but not strong enough to kill the foliage.
PEAR	Coddling Moth and Scale.	Bordeaux with arsenate of lead added.	In March, before buds swell.	After blossoms fall.	Repeat in two weeks.	Fourth application is needed. Use arsenate of lead if flea beetles are present.
PLUM	Curculio Rot and Blight.	Bordeaux, with arsenate of lead added.	Before blossoms open.	After blossoms fall.	Repeat two weeks later.	Best to add arsenate of lead for any biting insects which may be present.
CURRENT and GOOSEBERRY	Mildew, worms, Aphids	Bordeaux.	When leaves appear.	Repeat in ten days.	Recommended solution if Aphid is present.	The fire blight of the pear cannot be controlled by spraying.
RASPBERRY, BLACKBERRY, and DEWBERRY	Fungous diseases.	Bordeaux.	When buds begin to swell.	Ten days later; Bordeaux, Hellebore for worms; quassia and tobacco for Aphids.	Repeat second when necessary.	If scale insects are present, use lime-sulphur or recommended compound.
						Watch the plants closely in spring and begin spraying as soon as worms are discovered.
						Dilute the mixture to half the strength given in formula—100 gallons of water instead of 50.



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